DEPARTMENT OF DEFENSE APPROPRIATIONS FOR 1961

HEARINGS

BEFORE THE

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

EIGHTY-SIXTH CONGRESS

SECOND SESSION

SUBCOMMITTEE ON DEPARTMENT OF DEFENSE APPROPRIATIONS

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PART 2

POLICY STATEMENTS, SERVICE SECRETARIES AND CHIEFS OF STAFF

Printed for the use of the Committee on Appropriations

UNITED STATES
GOVERNMENT PRINTING OFFICE
50341 WASHINGTON : 1960

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DEPOSITED BY THE
UNITED STATES OF AMERICA

DEPARTMENT OF DEFENSE APPROPRIATIONS, 1961

MONDAY, JANUARY 18, 1960.

DEPARTMENT OF THE NAVY

WITNESSES

HON. WILLIAM B. FRANKE, SECRETARY OF THE NAVY
ADM. ARLEIGH BURKE, U.S. NAVY, CHIEF OF NAVAL OPERATIONS
GEN. DAVID M. SHOUP, U.S. MARINE CORPS, COMMANDANT
REAR ADM. G. F. BEARDSLEY, U.S. NAVY, DEPUTY COMPTROLLER
REAR ADM. LOT ENSEY, U.S. NAVY, ASSISTANT COMPTROLLER; DIRECTOR OF BUDGET AND REPORTS
REAR ADM. FRANK B. MILLER, U.S. NAVY, ACNO (GENERAL PLANNING)
REAR ADM. H. A. YEAGER, U.S. NAVY ANTISUBMARINE WARFARE READINESS EXECUTIVE
CAPT. ROGER MEHLE, U.S. NAVY, HEAD, AIR WEAPONS SYSTEM ANALYSIS STAFF (PRESENTATION ON CARRIER)

Mr. MAHON. The committee will come to order. We are pleased to have before us today the Secretary of the Navy, the Chief of Naval Operations, the Commandant of the Marine Corps, and others. I believe this is your first appearance, Mr. Franke, as Secretary of the Navy.

BIOGRAPHY OF THE SECRETARY OF THE NAVY

As we often do, we will place in the record at this point a biographical sketch in regard to your background and experience.

(The biographical sketch of Secretary Franke follows:)

BIOGRAPHY OF WILLIAM BIRRELL FRANKE

Appointed by President Eisenhower to serve as Secretary of the Navy, the nomination of William B. Franke of New York City was confirmed by the Senate and he took the oath of office on June 8, 1959. Prior to his appointment, Mr. Franke served as Assistant Secretary of the Navy (Financial Management) from October 1954 until April 1957 and as Under Secretary of the Navy from April 1957 until June 1959.

William Birrell Franke was born in Troy, N.Y., on April 15, 1894. He has resided in New York State since his birth. In Washington, D.C., Mr. and Mrs. Franke reside at 5016 Loughboro Road NW. They have a home in Rutland, Vt.

He attended local schools in Troy, N. Y., and was graduated from Pace Institute of Accountancy in New York City.

Prior to graduation from Pace Institute, Mr. Franke was employed by Cluett, Peabody & Co. of New York, and by Naramore, Niles & Co. of Rochester, N.Y., until 1928, when he formed his own accounting firm of Franke, Hannon & Withey of New York and became the senior partner. In 1924 he became a member of the American Institute of Accountants and also during that year was received into the New York State Society of Certified Public Accountants. He holds an honorary degree of doctor of science from the University of Louisville, which was bestowed in 1948, and the honorary degree of doctor of laws from Pace College in 1955.

From 1948 to 1951, Mr. Franke was a member of the U.S. Army Controllers Civilian Panel, Washington, D.C. He was special assistant to the Secretary of Defense in 1951–52. In 1951 Mr. Franke was given the Patriotic Civilian Commendation by the U.S. Army, and in 1952 the Distinguished Service Award by the Department of Defense.

In addition to being the senior partner in his own firm, Mr. Franke was associated with a number of other firms in various capacities which included positions as chairman of the boards of John Simmons Co., Inc., and General Shale Products Corp., and as director of the Carolina, Clinchfield & Ohio Railway Co.

Mr. Franke is a member of the Union League Club of New York City, the Army-Navy Club and the Chevy Chase Club of Washington, D.C., and the Rutland Country Club of Rutland, Vt.

Mr. Franke is married to the former Bertha Irene Reedy (formerly of Schenectady, N.Y.). They have three children: Phyllis (Mrs. Harding H. Fowler), Anne (Mrs. John Anthony Ulinski, Jr.), and Patricia (Mrs. W. Sherman Kouns).

Mr. MAHON. This is a time of very great change in military concepts. We have been engaged in the battle of the Defense budget for a number of years. That battle continues. We are aware of the general outline of the Defense budget because we have heard the Secretary of Defense, Mr. Gates. It may be you will repeat some of the things he said in regard to the Navy program, but that is perfectly permissible. We will not suffer from too much information.

You happen to appear before us on a very significant day, January 18, the day that is set aside for the receiving in Congress of the President's overall budget of $79 billion for the fiscal year 1961. The attention of America will today be on the budget, and the Navy is an important and essential fraction of that budget.

We are pleased to welcome you here and we would like for you to proceed and give us your story in detail before we go into a period of interrogation. So the field is yours, Mr. Secretary.

Secretary FRANKE. Thank you, Mr. Chairman.

GENERAL STATEMENT OF THE SECRETARY OF THE NAVY

Secretary FRANKE. Mr. Chairman and members of the committee, it is a privilege to appear before you as the Secretary of the Navy. As most of you know, I became Assistant Secretary of the Navy for Financial Management in October 1954, Under Secretary in April 1957 and Secretary in June of last year. This, therefore, is the first opportunity I have had of appearing before this committee as Secretary.

My general discussion of the budget will be followed by more detailed presentations by Admiral Burke and General Shoup. Subsequently in the hearings of this committee, other officers and civilians of the Navy and Marine Corps will present to you in much greater detail the support for the individual appropriation requests.

In the various positions I have held in the Navy, I have helped to prepare six consecutive Department of the Navy budgets. Each year this preparation has become more difficult. The necessity of balancing requirements against resources, the tremendous advances in weapons technology, the increase in the cost of almost everything we buy—all of these have contributed to the difficulties of budget preparation. While the military strength of our country is of predominant importance if we are to survive the threats we face, the economic welfare of the country, too, is of importance. Both factors enter into the development of national budgets.

During the year since my predecessor, Secretary Gates, appeared before this committee as Secretary of the Navy, there has been no apparent change in the nature of the threats we face. During the year, as in previous years, the Communists have probed and tested and pushed at the slightest evidence of political, economic or military weakness. There is no evidence that these activities will cease. Therefore, the evidence of the past, and anything that we can foresee for the future, indicates that we must continue to maintain a strong military posture.

The Department of the Navy joins with the other military services of our country in providing modern and effective military power. The Navy provides the sea-based arm of our national deterrent against both general and limited war. Our task forces and our mobile marine air-ground landing teams at sea have repeatedly demonstrated their ability to be at a potential source of trouble when required. They are a powerful deterrent against limited war. In the near future nuclear submarines with POLARIS ballistic missiles will be operational and will contribute tremendously to deterrence of general war.

This does not mean that we are complacent. We know that we cannot, for a single moment, rest upon past achievements. We know that within the amount of annual budget dollars provided us, we must use those dollars in the most efficient manner possible. We know that we must be constantly searching for new and better weapons systems. And we know that we must scrap an existing system or one that is in the process of being developed, when it has been determined that it is no longer satisfactory, has become obsolete, or will clearly be overtaken by something better. We have recognized the need, however, for continued use of the ships and equipment which we now possess and we have made progress in extending their life and increasing their effectiveness.

The Navy's budget, which I am presenting to you today, is the product of the best ability within the Navy and the Marine Corps and is the result of countless hours of effort on the part of many people. It is a resolution of requirements, conditioned by resources available, and interrelated with the programs of the other services. Within this context it provides the best balance of programs for the Navy and Marine Corps that the Chief of Naval Operations, the Commandant of the Marine Corps and I have been able to devise.

METHOD OF BUDGET PREPARATION

A summarization of the procedures followed in the preparation of this budget seems to me to be appropriate at this point.

On May 12, 1959, the Navy instructed each budget-originating activity to submit to the Comptroller of the Navy a budget request in 2 parts as follows:

Part I: For all accounts except personnel and POLARIS, an amount equal to the direct obligations for fiscal year 1960, plus 10 percent.

Part II: An add-on to cover other programs in the program objectives of the Navy Department, but of lesser need than those included in part I.

It was felt within the Navy that this method of presentation would provide a preliminary separation of meaningful segments for analysis, review and decision and this proved to be so.

On this basis the total amounts submitted by the Bureaus and Offices of the Navy were as follows:

	Million
Part I	$13,669
Part II	5,656
Total	19,325

Early in July 1959, the Secretary of Defense requested each of the services to submit to him for planning purposes and in terms of both new obligational authority and expenditures a basic budget and an add-on budget, as explained in Secretary Gates' statement to the committee. Under this plan the Department of the Navy planning objectives were: A basic budget of $11,203 million for new obligational authority and $11,467 million for expenditures and a total budget, including add-on, of $12,271 million for new obligational authority and $11,822 million for expenditures.

After weeks of review within the Navy, the requests submitted by the program sponsors were reduced to the total planning figure of $12,271 million. After further weeks of discussion and review by the Secretary of Defense and his assistants, the final Department of the Navy budget in terms of new obligational availability was determined to be $12,073 million, including $60 million to be derived by transfer from revolving funds. The budget also provides for direct obligations of $12,139 million and expenditures of $11,683 million. These are the figures which the President has transmitted to the Congress for approval. Of the total of $12,073 million for new obligational availability $197 million is for military construction.

ANTISUBMARINE WARFARE

As a result of this committee's concern about the submarine threat, the Congress appropriated last year, in addition to the Navy's request, $137,300,000 for the antisubmarine warfare program. These funds were for the procurement of additional aircraft, additional antisubmarine weapons, an additional nuclear-powered submarine and for research and development. The money has been apportioned and we are implementing this augmented program. The antisubmarine warfare mission is one of the Navy's most important missions and we welcome the committee's strong interest and support.

Admiral Burke will speak at length of the antisubmarine warfare program and of the difficulties the Navy faces in meeting this very important problem. Many parts of the Navy are involved, including the operating forces, the research and development organizations, and the procurement agencies. Both Admiral Burke and I felt a need to bring all of these elements together at frequent intervals, not only to inform ourselves but to give top level guidance to this exceedingly complex problem. Accordingly, I recently formed a Committee on Antisubmarine Warfare with myself as chairman, Admiral Burke as vice chairman and all parties having a major interest represented in the membership. The committee meets monthly or more often if necessary.

CHANGES IN APPROPRIATION STRUCTURE

In order to obtain greater comparability among Army, Navy, and Air Force appropriations, and to comply with congressional recommendations, two changes have been made in the appropriation structure of the Navy.

A new procurement account called "Other procurement, Navy" has been established. This account is designed primarily to fund general capital items which previously have been included in other appropriations. Examples of such items are ordnance and ammunition, aircraft support equipment, and certain major electronics. One result of this new appropriation will be to remove most capital procurement items from the operation and maintenance appropriations.

A further change in appropriation structure results from the merger of the Bureaus of Aeronautics and Ordnance, to which reference will hereafter be made. As a result of this merger, two previous appropriations "Aircraft and related procurement" and "Procurement of ordnance and ammunition" have been eliminated and a new appropriation "Procurement of aircraft and missiles" has been added.

In addition to these structure changes, some programs in the procurement accounts which were in the research and development stage have been transferred to the "Research, development, test, and evaluation" appropriation.

MILITARY PERSONNEL

The budget supports planned active duty begin and end strengths of 619,000 for the Navy and 175,000 for the Marine Corps.

This represents a reduction of 11,000 in active-duty Navy personnel. The reduction was made in order to provide additional funds for major procurement so as to improve our future capability. As a result of this reduction some of the older ships of the Navy will be laid up and there will be a slight improvement in the manning level of the remaining fleet units.

The active-duty personnel of the Marine Corps is maintained at the present level of 175,000 and the increase of 25,000 provided by the Congress last year has not been implemented.

We are budgeting for 129,000 Navy and 45,000 Marine Corps personnel in a drill-pay status.

OPERATION AND MAINTENANCE

The establishment of a single operation and maintenance appropriation for the Navy in fiscal year 1960 consolidated nine separate operation and maintenance appropriations and conformed with the general structure of appropriations within the Department of Defense. No significant reprograming has occurred within this account during fiscal year 1960 except for the transfer of funds from the programs "Ordnance and facilities and civil engineering" to the program "Ships and facilities" in order to fully fund the fleet rehabilitation and modernization program.

Also, as a result of last year's congressional action, the Marine Corps has a separate appropriation for operation and maintenance. These two appropriations finance the support of the operating forces and

the Shore Establishment. They are the appropriations which determine the level of our current readiness.

In fiscal year 1961 we proposed to operate 817 active fleet ships, including 382 warships, and about 6,800 aircraft. These represent reductions of 47 ships and about 400 aircraft below the originally planned fiscal year 1960 level.

The majority of our ships are old and as a result require more maintenance. The increasing complexity of machinery and equipment to be maintained, rising material and labor costs, and the increased tempo of operations have combined in recent years to lower the material condition of the fleet. Accordingly, we propose to continue in the fiscal year 1961 the fleet rehabilitation and modernization program under which more than normal overhauls and rehabilitations will be given to selected ships in the overhaul schedule. The useful life of these ships will thereby be increased.

The Marine Corps will continue to be composed of three combat divisions and three aircraft wings with supporting units and organizations.

An important element of the appropriation "Operation and maintenance" is the operation of the Shore Establishment. The sole purpose of the Shore Establishment is to support and serve the fleet. Because of the many technological changes in fields affecting weapons systems that have and are taking place, and with the reduction in naval military forces and strength in recent years, it is necessary that we constantly study the Shore Establishment so that it is adequate—but not excessive to its mission.

Many activities have been consolidated on a functional basis—others have been eliminated in total or reduced in scope. As a result of these changes, the civilian employment in the Shore Establishment has been reduced from the beginning of fiscal year 1958 through December 31, 1959, by 40,000. The review of the Shore Establishment is a continuing effort.

MAJOR PROCUREMENT

SHIPS

This budget provides for 20 new ships and 15 conversions. Included are a *Forrestal* class attack aircraft carrier, three guided missile frigates, two guided missile destroyers, three nuclear-powered attack submarines, three nuclear-powered ballistic missile submarines, one amphibious transport dock, two escort vessels, one fast combat support ship, one combat store ship, one oceanographic research ship, one escort research ship, and one deep-diving auxiliary submarine.

The funds requested for the shipbuilding and conversion appropriation include a new pricing method which we call funding to completion for which your approval is requested. Since Admiral Burke's statement explains this new method in detail, I will not comment further in this statement.

Since the aircraft carrier is of vital importance to the Navy, I propose to discuss it in some detail.

At present time the Navy has in operation 8 attack carriers of the *Essex* class, 2 of the *Midway* class, and 4 of the *Forrestal* class, for a total of 14. The *Essex* class carriers are old and are not adequate for modern aircraft. Under construction are two carriers of the *Forrestal* class, conventionally powered, and the *Enterprise*, nuclear-powered,

and under conversion is the third carrier of the *Midway* class. The Navy needs 14 modern attack carriers.

The Navy's original estimate of the cost of the *Enterprise* was $314 million. Last July we were asked by the chairman of this committee for the latest estimated cost of the *Enterprise*. The best information available to us at that time was that the cost of the *Enterprise* would be $435 million. This price included the estimated cost of design changes and improved equipment, which had become available since the original estimate was made, and the increased costs of labor and material since the original estimate.

In November 1959, as the result of more accurate information on the cost of the radar and catapult systems to be installed in the *Enterprise*, the estimated cost of the *Enterprise* was increased to $471 million; $27 million of this amount, however, is associated with the development costs of the radar, catapult, and communication systems to be installed in the *Enterprise* and subsequent large ships and carriers, and should properly not be charged to the *Enterprise* alone.

The air search radar now scheduled to be installed in the *Enterprise* is of much greater complexity and cost than that installed in other carriers, but will give us a very much increased detection range and other significant improvements. The internal combustion catapult system is required in a nuclear-powered ship which handles heavy aircraft because the steam available in a nuclear powerplant is not of sufficiently high pressure for use in a conventional steam catapult system.

Other equipment for which development costs have been charged to the *Enterprise* include an improved height-finding radar, application of the Navy tactical data system, and high-capacity communication equipment.

We have examined the cost of the *Enterprise* very carefully and have eliminated every item of equipment not absolutely essential to the prosecution of her primary offensive mission. Included in this category is the defensive missile system TERRIER which was eliminated last November. Space for this system, or an improved system having both surface-to-air and surface-to-surface capabilities, has been retained should it later be considered necessary.

The *Enterprise* was approved in the Navy's budget for the fiscal year 1958 and will be completed late in 1961. In last year's budget the Navy requested a conventionally powered carrier of the *Forrestal* class. Although Congress did not approve this request, it recognized the need for a new carrier by providing $35 million for long-leadtime items. The propulsion plant, however, was stipulated as nuclear. This year the Navy, the Defense Department, and the President are requesting, in effect, that the decision on the type of propulsion plant be modified.

The Navy budget as first submitted to the Secretary of Defense included a nuclear-powered carrier. It was proposed that this be a four-reactor ship compared to the eight-reactor *Enterprise* and that it would be somewhat smaller in size. The estimate for this ship, funded to completion, was $423 million—as compared with the $293 million for the conventional carrier requested in this budget.

Consistent with that action, release of the $35 million for long leadtime items was sought. After lengthy discussions with the Secretary of Defense and the President, it was concluded that the

difference in cost of $130 million could be used to much greater advantage for other Navy programs. Currently the utilization of this $35 million is being held in abeyance, pending an indication of congressional intent relative to this year's request for a nonnuclear carrier.

The need now for a modern attack aircraft carrier is particularly urgent since we have not laid down one of these ships since 1958. The use of conventional power will in no way compromise capability of the carrier to function as a completely effective mobile base for fleet aircraft during the foreseeable future. The Navy is well aware of the advantages of nuclear-powered ships. Although a nuclear-powered attack aircraft carrier would have certain military advantages, such as extended range and endurance at high sustained speeds, these advantages are not overriding as in the case of the submarine. We have had outstandingly successful results with nuclear-powered submarines, and we anticipate outstanding results from nuclear-powered surface ships, but we need other things as well—other ships, airplanes, and missiles.

AIRCRAFT

The budget provides for 658 aircraft. All models are for use by the operating forces in combat missions or in direct support thereof. The program includes significant numbers of the F4H, an all-weather supersonic fighter; the A3J, a supersonic attack aircraft; the P3V, a new and improved antisubmarine warfare patrol aircraft and the HSS–2, an improved antisubmarine warfare helicopter. In addition, procurement of a low level attack aircraft, the A2F, and an improved AEW aircraft, the W2F, is being continued. Last year the committee expressed concern about the number of different models of aircraft being procured. This year we have reduced the number of models from 16 to 12.

MISSILES

The procurement of missiles for fleet combat use and training allows for a small improvement in the material readiness of the Navy. The fiscal year 1961 program provides for the continued production of the SPARROW III and the improved SIDEWINDER air-to-air missiles, and for the air-to-surface BULLPUP missile. It continues the integration of ship-launched TALOS, TERRIER, and TARTAR missiles in consonance with the construction and conversion of vessels with guided missile capability.

MARINE CORPS

The funds for Marine Corps procurement included in this budget will provide for an annual increment in the modernization of the Fleet Marine Forces. This includes the second of four annual increments programed to equip the Marine Corps with the new 7.62-millimeter weapons family.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

The fiscal 1961 Navy request for Research, Development, Test, and Evaluation is $1,169 million. The largest single program included therein is POLARIS. This program will be carried on at about the same high level provided for in 1960 in order that the full effectiveness of

this powerful deterrent weapon system can be realized as soon as possible. Antisubmarine warfare continues to be an area of major emphasis within the Navy, and carries a priority second only to the POLARIS effort. We are continuing to support a strong research and development program on search, detection, classification and destruction systems for antisubmarine warfare employment in aircraft, surface ships, and submarines. The important oceanographic program, which is closely related and essential both to the Polaris and the ASW effort, is funded at the level recommended in the 10-year oceanographic research plan.

The Navy's program in basic scientific research will be supported in fiscal 1961 at the level attained in fiscal year 1960. Naval laboratories and universities throughout the country are embarked on this pursuit of fundamental knowledge which will provide the basic technology for the development of ships and weapon systems for the Navy of the future.

The Marine Corps Research, Development, Test, and Evaluation program, in many cases jointly with the Army, will carry forward the development of a lightweight artillery weapon, an amphibious support vehicle, and other developments to provide the operating forces with modern weapons, equipment, and supplies required for modern amphibious assault capability.

ORGANIZATIONAL CHANGES

From August of 1958 until February of 1959 I was chairman of a committee appointed by Secretary Gates to review the organization of the Department of the Navy and to make recommendations to improve the organization. Many recommendations were made by the committee. These recommendations, as approved by Secretary Gates, either have been implemented or are in the process of implementation.

I will not speak in detail of the many recommendations but will refer to three. One was to merge the Bureau of Aeronautics and Ordnance. This recommendation was approved by the Congress and the merger became effective on December 1 last. Another was to establish the Office of the Assistant Secretary of the Navy for Research and Development to have cognizance of all Navy R. & D. efforts. The other was to consolidate all of the research and development operations being carried on in the Office of the Chief of Naval Operations under a new Deputy Chief of Naval Operations for Development. These new offices under Dr. Wakelin and Vice Admiral Hayward respectively have been functioning for some months and the results achieved have already proven the soundness of the recommendation.

CONCLUSION

In recapitulation, this budget in my opinion gives the Navy and the Marine Corps the best balance in forces and capabilities that I have seen in 6 years of being involved in budget preparation for the Department. It is as good as any budget of this magnitude can be. I know of no soft spots and I know of no items which are not necessary to enable the Navy and the Marine Corps to carry out their share of the responsibility of the defense of this country.

Mr. MAHON. Thank you very much, Mr. Franke, for that helpful statement. We will proceed now, Admiral Burke, with your statement.

GENERAL STATEMENT OF THE CHIEF OF NAVAL OPERATIONS

Admiral BURKE. Mr. Chairman and members of the committee, this is a welcome opportunity to discuss with you the Navy's budget for fiscal year 1961 and the deliberations which resulted in its formulation. Secretary Franke has already given a comprehensive picture of the general need for funds and the purposes for which they will be used. In my remarks I will describe considerations underlying the Navy's budget in greater detail.

GENERAL

Military budgets of the Defense Department must provide for adequate forces to preserve the security of the United States and participate in maintaining the integrity of the free world. We work closely with the Army and the Air Force and with the armed forces of our allies to maintain a military posture that will do its part to prevent the further spread of communism and promote the ideologies and interests of free nations.

In this statement I should like first to discuss briefly the present international situation; second, certain budgetary considerations which influenced the formulation of the Navy's fiscal year 1961 budget; and third, the forces and programs that the budget will fund.

THE INTERNATIONAL SITUATION

The recent current international situation has been highlighted by Soviet statements for peaceful coexistence—and proposals for disarmament. The fact remains, however, that the Communist bloc has done nothing concrete to indicate they have changed their intent to dominate the world.

Despite frequent reiteration of peaceful intent—the Soviets continue to maintain large military forces. These forces are modern, well trained, and well equipped to fight any type of war, from small limited wars to a worldwide nuclear conflict. These forces are used effectively as a psychological weapon in the cold war.

In August, Soviet military writers declared—that modern Soviet submarines will be able to travel under the Arctic ice—and penetrate, for instance, to Hudson Bay—and "launch rockets directed at Detroit and other industrial objectives of the Great Lakes." More recently Mr. Khrushchev has boasted of the missile production rate of a factory he visited.

While not considering themselves restricted to a specific timetable—the Soviets are still convinced of the ultimate success of communism. They feel that they have made substantial gains in recent years by the use of tactics short of open warfare by their own troops. They have the patience to continue these efforts. By the use of political, economic, and psychological means, they apparently feel that they can continue progress.

In the relatively peaceful atmosphere of the world today, there exist many trouble spots, and many potential areas for exploitation by cold-war measures. Some are quite evident; others are extremely difficult to recognize. Newly independent nations are often economically, and politically, unstable. They constitute prime targets for Communist exploitation. In other areas which have not yet attained independence—but are moving rapidly toward it—various degrees of resentment exist toward the former colonial powers. These new governments are susceptible to promises of assistance of economic and military aid, or to political advice in their desire to effect radical changes.

Events during the past year make these points evident. In Asia—the Chinese continue shelling of the offshore islands—and vow to occupy Taiwan ultimately. Within the past year, the Dalai Lama has been forced to flee Tibet and has been replaced with a puppet ruler. More recently, we have witnessed Chinese Communist incursions along the Indian border. In June a U.S. Navy patrol plane was attacked, without provocation, over the Sea of Japan. In southeast Asia, the Russians provided military aid to Indonesia in the form of destroyers and submarines. A Russian task force also paid a first visit to Indonesia in November 1959.

In the Middle East the Soviets have been conducting a vigorous propaganda campaign to discredit the Government of Iran. The unsolved issue of Arab versus Israeli remains as a trouble spot. An attempt was made to assassinate the Premier of Iraq. While the United Arab Republic has indicated a desire for better relations with the Western Powers it continues economic collaboration with the Soviet bloc.

In north Africa, intense nationalism has created difficulties between the United States, and local governments over base rights. This country has agreed to relinquish its bases in Morocco. South of the Sahara, nationalistic aspirations, and racial differences, have led to situations which make primary targets for exploitation by Communists.

In our own hemisphere trouble spots have resulted in increased chances for Communist influence. Here, too, U.S. base rights and facilities are being challenged. Hostilities involving U.S. forces do not appear imminent, but the danger of them, is ever present. To recognize these facts, and to be prepared to act, in the proper place, at the proper time, in the proper manner, is important.

In a world of such potential trouble spots, opportunities are ever present for the Communists to expand influences, opportunities are also present for the West to support the ideals of a free world.

The members of the committee are thoroughly familiar with the elements of Soviet and Communist bloc military power. No group is better informed on the international crises that have occurred in recent years and the Navy's response to these crises at such widely divergent places as Suez, Vietnam, Lebanon, and the Formosa Straits.

BUDGET CONSIDERATIONS

This background of international tension and unrest had to be considered during the formulation of the Navy's budget. A Navy of about the present size, expressed in terms of men, ships, and air-

craft, is needed to do the jobs facing us in meeting our day-to-day responsibilities—today and tomorrow. Each year it costs more to operate a slowly shrinking Naval Establishment. Personnel costs have increased. It costs more to operate and maintain our ships and aircraft. Rising costs of labor and material cut the buying power of available dollars.

We also have to look to the Navy of the future and keep abreast of new weapons and technology that are the fruits of our development effort. These new weapons and new weapons systems with their longer ranges, higher speeds, greater power, and shorter reaction times are much more expensive, not only in terms of dollars but in terms of size and weight and manpower as well. These new things we must have if we are to be effective in future years. We must have them in adequate numbers as well. The result is our new procurement and our development effort each year demands a greater share of the budget dollar.

In an environment of level funding where operating costs and procurement costs are each demanding a greater proportion of the budget dollar, the problem of maintaining a proper balance between immediate readiness to meet today's requirements and future capability to carry out tomorrow's responsibilities become increasingly difficult each year.

As Secretary Franke has stated, the Department of the Navy budget requests for fiscal year 1961 for planning purposes were not to exceed $11,203,000 of NOA and $11,467,000 of expenditures in the basic budget. In the addendum budget the NOA was $12,271,000 and the expenditures were $11,822,000.

During July we quickly determined that our biggest problem in determining a satisfactory balance among programs lay in the expenditure area. As you know, the annual accounts (military personnel and operations and maintenance) are spent during the fiscal year for which appropriated. On the other hand, the continuing accounts (procurement, research, development, testing, and evaluation and military construction) spend out at about 20 percent during the year appropriated, 26 percent during the second year, and the remaining 54 percent in succeeding years. When we combined our best estimate of annual account expenditures with expenditures incurred from prior year obligations there remained only a few hundred million dollars of expenditures to apply to fiscal year 1961 procurement, research, development, testing, and evaluation, and construction programs and still remain within the expenditure target.

There are three approaches that can be taken to shrink expenditures. First, forces and military strength can be cut to reduce the annual account expenditures. Second, expenditures incurred from prior year obligations can be reduced by canceling some fiscal year 1960 and prior year programs and by deferring obligation of others until the last 2 or 3 months of fiscal year 1960. Third, the size of fiscal year 1961 procurement, research, development, testing, and evaluation and military construction programs can be reduced.

We worked up several plans based on these alternatives. If we provided adequately for force levels and military strength, very little expenditures were left for new procurement, research, development, testing, and evaluation and military construction. If we funded adequately for procurement, we were faced with drastic cuts in force

levels and personnel. None of these plans was satisfactory. Either the expenditure target was greatly exceeded or the new obligational availability was so depressed as to be fiscally infeasible.

We finally concluded we would have to apply all three measures in varying degrees of severity to strike the best balance among programs.

Accordingly, the basic budget that was finally submitted to the Secretary of Defense on September 3, 1959, was a compromise all along the line. Our begin and end strength in military personnel was held at the fiscal year 1960 planned level but the average man-year strength was considerably lower. The ship force level was held at about 860 ships but steaming hours were drastically cut back. Both operating aircraft and flight-hour programs were greatly reduced.

The fiscal year 1960 financial plan was adjusted so that planned obligations in 1960 were reduced and the expenditure reductions in fiscal year 1961 gained thereby were applied to provide an increment toward new procurement. The plan called for deferring the award of new programs in both 1960 and 1961 to the last quarter of each fiscal year and for stretching out going programs in fiscal year 1960.

Fiscal year 1961 procurement, research, development, testing, and evaluation and military construction were reduced well below prior-year levels.

It was fully realized that this meant that we were creating severe management problems involving increased unit costs and extensive civilian personnel layoffs, both in the naval service and in private industry. Of more importance, it meant delay in the delivery of urgently needed ships, aircraft, and weapons.

In the addendum budget practically all of the increase was applied to the continuing accounts—to procurement. This action did not alter the basic plan but it did bring the procurement program levels slightly above those in fiscal year 1960.

After weeks of discussion and review with the Secretary of Defense and his staff, it was determined that the Department of the Navy budget would be $12.073 billion of new obligational availability. This budget provided for expenditures of $11.683 billion. The final budget decision provided for a reduction in force levels and military strength to reduce costs in the annual accounts. Procurement programs and research, development, testing, and evaluation were kept at about the fiscal year 1960 level and military construction was well below the fiscal year 1960 level. Fiscal year 1960 planned obligations were adjusted to keep fiscal year 1960 and 1961 programs alined.

Taking all factors into consideration the Secretary and I consider we have arrived at the best possible balance in programs. The most important aspects of these programs are discussed in the sections that follow.

ACTIVE FORCES

During this fiscal year, we will reduce personnel strength to 619,000 which the fiscal year 1961 budget supports. Associated with this reduction is an attendant force reduction of ships and aircraft in the active fleet.

We anticipate further increase in the retention of officer and enlisted personnel in fiscal year 1961 as a result of the Cordiner report. This is a continuation of the favorable personnel stability and competence trends which I reported to the Congress last year.

In reserve personnel an end fiscal year 1961 drill pay strength of 129,000 is planned. This is less than our authorized level of 135,000, but is satisfactory for 1961. We hope to go to our authorized level in 1962.

The size of the active fleet is being reduced from 864 to 817 ships and from 7,200 to about 6,800 operating aircraft by the end of fiscal year 1961. This is a reduction of 47 ships and about 400 aircraft below our originally planned fiscal year 1960 strength. The warship strength of the Navy will then be 14 attack carriers, 9 antisubmarine carriers, 14 cruisers, 1 command ship, 226 destroyer types, 112 submarines, and 6 fleet ballistic missile (POLARIS) submarines.

This will be a net reduction of 4 warships below the end fiscal year 1959 level of 386. The other reductions will be in amphibious, patrol, and auxiliary-type combatant ships. Although the capability of individual units of the fleet will be significantly improved by the addition of new and converted ships during the year, the numerical reduction will entail some restrictions on the ships that can be committed to tasks normally performed by the Navy. We will lay up all 47 ships during the remainder of this fiscal year so that we can use the O. & M. funds for operating them in fiscal year 1960 to pay for laying them up since there are no funds in the O. & M. requests in the fiscal year 1961 budget for either operating these ships or paying for decommissioning them.

As I reported last year, we have a very active program to rehabilitate, thoroughly overhaul, and modernize 27 selected older ships in the fleet to extend their useful lives—the FRAM II program.

The reduction of approximately 400 operating aircraft also presents a serious problem to the Navy. We have not reduced the number of our combat aircraft—our carrier and our antisubmarine aircraft and our vertical assault helicopters. The reduction will be made in the numbers of support, administration, and training-type aircraft. There will be fewer aircraft available for the Naval Air Reserve program.

The reduction in the number of operating aircraft is brought about by the size of prior year procurement programs. The numbers of new aircraft entering service are not sufficient to offset our losses due to accidents, wear-out, and obsolescence. We are also stretching out the use of the older aircraft remaining in service despite the penalty of added costs for more replacement parts and more extensive reworks.

Even though we have fewer aircraft in our inventory each year, the newer, larger, and more complex aircraft cost more to operate and maintain. This fact combined with the fact that the older aircraft cost proportionately more to maintain and the fact that costs of labor and material have risen, explains why we have to pay more to fly fewer aircraft.

Directly associated with the reductions in the Active Forces are the reductions in the supporting Shore Establishment. About 3,000 officers and men will be taken from shore activities and civilian personnel strength will be reduced about 2 percent—7,065—at the same time. The Secretary has already informed the Congress of certain proposals to disestablish some facilities and to reduce others. As the size of the operating forces is reduced, the size of the Shore Establishment has to be reduced accordingly, in order to maintain a proper balance. At the same time, the maintenance of the Shore Estab-

lishment is and has been a continuing problem of ever-increasing difficulty. There is a large backlog of deferred maintenance which we will be able to reduce very little in fiscal year 1961. We realize that this is not good management practice, but the fact remains that we simply cannot afford to divert operations and maintenance funds in significant amounts from the operating forces to overcome this problem. The Congress has expressed its dissatisfaction with the material condition of the Naval Academy and we have taken positive action to rectify this condition over a 3-year period. There are other equally pressing material problems in the Shore Establishment that will have to wait.

The critical nature of the managerial problem ashore is emphasized by the developments of the past 5 years. There has been a net reduction of 20 major and 35 minor shore activities. Thirty-four activities were reduced in operational status. The number of military personnel ashore has been reduced by 20,000. The number of civilian personnel has been reduced by 53,500. While the foregoing reductions were made in the interests of improved efficiency and economy, the total annual salary of the remaining civilian personnel alone increased by $210 million. This more than offsets our efforts to economize.

PROCUREMENT

As Secretary Franke mentioned in his statement, we have completed the merger of the Bureau of Aeronautics and the Bureau of Ordnance into the Bureau of Naval Weapons, which became an operating organization on December 1, 1959. The appropriations which support procurement for the new bureau are entitled "Procurement of aircraft and missiles, Navy" and "Other procurement, Navy." I would like to discuss the two major programs funded by the "Procurement of aircraft and missiles, Navy."

NAVAL AVIATION

This year our aircraft procurement program will buy 658 aircraft. This is essentially a level program. In fiscal year 1958 we bought 681; in fiscal year 1959, 651; and in fiscal year 1960 we plan to by 689. I would like to point out again that these numbers do not replace our annual accident (571) and wearout losses (352), a fact which portends further reductions in operating aircraft. The downward trend will continue for at least 2 years as the aircraft we buy in fiscal year 1961 will not go into service use until fiscal year 1963. An indication of the seriousness with which we regard this problem is that the entire aircraft buy in fiscal year 1961 will be devoted solely to the procurement of combat and combat-support types. No administrative or training types of aircraft whatever have been included in this budget, although we need them.

Naval attack aircraft must be capable of matching the demonstrated high-performance aircraft of any potential enemy. This means aircraft with high thrust engines, large fuel and weapon capacity, and heavily built airframes capable of withstanding the pressures of high-speed flight. Whether they are for attack, fighter, antisubmarine, tactical assault, support, or early warning use, naval aircraft grow heavier, faster, more complex, and more expensive. They are

also considerably more effective per unit. If it were possible, we would like to confine our procurement to one or two types of aircraft a year, because, in so doing, we could buy larger numbers of aircraft in mass-production quantities at lower unit cost per aircraft. But we simply cannot crowd all of the complex equipments required for modern naval air warfare into two or three basic airframes. Each year we have striven to reduce the number of types of aircraft we must buy in that year. We have had considerable success in that endeavor and are now close to the minimum number of types. This year we are buying 12 types of aircraft. Last year it was 16 types, and the year before it was 20.

Control of the air over the fleet and over a beachhead requires fighter aircraft comparable to the land-based aircraft which the enemy will use to oppose them. In the F–8U–2N day-night fighter and in the F4H–1 all-weather fighter we are buying aircraft that fulfill this requirement. The F–8U–2N Crusader is an improved model of fighter that is already in fleet use. The F–4H–1 is an altogether new fighter with superior performance characteristics which will be entering the fleet in quantity for the first time with this buy.

Three attack aircraft are required. For general purpose work the A–4D–2N provides a light, easily maintained aircraft with limited all-weather capabilities. This "buy" continues the use of this versatile aircraft for another year in the fleet. Ultimately, it will be replaced by the A–2F–1, with improved range, endurance, and all-weather delivery capability. —— of these A–2F–1 aircraft are in this budget.

The A3J–1 Vigilante provides a fast, long-range, supersonic, high or low altitude, all-weather attack aircraft for nuclear or conventional bomb delivery. The —— aircraft contained in this budget will "buy out" the program. It will replace the A3D Skywarrior now in the fleet.

We are buying a very small quantity———of the W2F–1 early warning aircraft. It is an improved version of the WF–2 entering the fleet this year. It is intended that it will replace the old and inadequate AD–5W and supplement the WF–2's. It is a twin turboprop carrier-based AEW and interceptor control aircraft capable of higher speeds and altitudes than its predecessor.

Three improved types of helicopters are in the budget to meet different fleet needs. The HU2K–1 is a turbine-powered rescue helicopter. The HSS–2 will be the first all-weather ASW helicopter. The HSS–1 will provide an additional badly needed increment of vertical assault helicopters for the Marine Corps.

One new land-based ASW aircraft type is provided by the P3V–1, a special adaptation of the Lockheed Electra commercial transport.

To provide the Marines with a long-range inflight refueler and troop transport, a modification of the Air Force C–130 known as the GV–1 is provided.

A follow-on carrier-based ASW aircraft, the S2F–3, will provide improved capability for our hunter-killer groups when it replaces the old and overloaded S2F–1's now in use.

GUIDED MISSILES

The fiscal year 1961 budget will procure limited quantities of our most urgently needed missiles in the guided missile program. Although we are not getting as many as we would like, the buy will provide an initial minimum allowance for the new ships and aircraft joining the fleet.

Navy missiles in the program have proved their excellence in test, evaluation, and training. They have fully lived up to expectations. The success of the program is a matter of considerable satisfaction to the Navy; we believe our missiles to be the best of their type in existence today.

Air-to-air missiles being procured include SPARROW III, the only all-weather air-launched missile able to attack air targets head-on. A new and improved version of the SIDEWINDER is being procured in order to give the F8U–2N aircraft an all-weather capability with this weapon and to give the F4H a dual mode of attack.

The BULLPUP, the Navy's versatile and reliable air-to-surface missile with high explosive warhead, is being procured in some quantity.

For surface-to-air purposes, TALOS, TERRIER, and TARTAR missiles are being procured for missile cruisers, frigates, and destroyers.

The fleet ballistic missile POLARIS is funded in numbers sufficient for immediate needs.

The budget also provides for test and evaluation of missiles now under development—EAGLE, CORVUS, and SUBROC in the R.D.T. & E. program.

FUNDING OF SHIPBUILDING PROGRAMS AT PREDICTED COSTS

This year, in consultation with the Assistant Secretary of Defense, Comptroller, the Navy has made a basic change in the method of requesting new obligational authority from the Congress for "Shipbuilding and conversion, Navy," in fiscal year 1961. In essence, the new method is to request sufficient obligational authority to fund the shipbuilding programs at their predicted end costs.

This represents a departure from the traditional estimating technique which was to base the estimates upon the approved design concepts and the labor and material rates existing at the time the budget estimates were prepared. No projections of labor and material cost increases nor substantial allowances for future design changes and developments were included in these past estimates.

This previous method of pricing did not take account of the rapid technological progress and the labor and material price increases occurring during long construction periods. Thus, the initial estimates have not provided for ultimate costs of ships. As a result, in the past, the Navy has been forced to take the following undesirable actions: Request from the Congress each year large amounts of new obligational authority to complete prior year programs; delay or defer award of new ships until further funds are provided; cancel previously awarded ships.

Shipbuilding has not been the only program to be caught in an increasing cost squeeze. However, this program is unique in that a

ship is a tailored product. The awards of several ships of a given type are often split among several builders. Therefore, once a shipbuilding program has been awarded and work is started, it is far more difficult to adjust the program to cost changes than it is to reduce a production run of mass-produced items to accommodate growth in unit costs.

The concept of budgeting for the predicted end cost of ships will satisfy four major objectives:

Realistic estimates of final ship costs will be presented to the Congress before authorization and appropriation.

The full ship program can be expected to be awarded in the year authorized, since ships will be fully funded.

Requests for new obligational authority for cost adjustments will not be required after fiscal year 1961 (excepting those due to basic major characteristics changes).

Hereafter there will be no requirement for ship cancellation due to cost adjustments.

Under the revised budget concept, $829.2 million is required to fund all ships in fiscal year 1960 and prior year ship programs to their ultimate costs, including the known cost growth to date, as well as the estimated future growth. Of this amount, $317.5 million will be provided through reprograming of funds appropriated for five ships in the fiscal year 1960 program. The remaining amount required—$511.7 million—is included in the fiscal year 1961 new obligational authority request. In addition, about $230 million is included in the unit costs of the fiscal year 1961 ship program to provide for cost growth.

Congressional approval of the budget as submitted would permit attainment of the four objectives outlined above. In the future, the Congress would be requested to provide additional funds for prior program ships only in case of a major change in characteristics, such as a fundamental change in the armament of the ship. In each such case, the Congress would be informed and a request to provide additional funds would be included in the next budget.

The Navy believes that end-cost estimating is a straightforward and realistic approach, which will prevent costly and disruptive program cancellations and delays and obviate the need for continual requests for supplementary funding from the Congress for prior year programs.

SHIPBUILDING AND CONVERSION

The annual shipbuilding and conversion program is the one program on which the future of the Navy rests most heavily. The ships approved in this program will enter the fleet some 3 to 5 years later. In these we put the very latest weapon systems and other newly developed equipments that are practicable to install. No ship is exactly like its predecessors. It is a better and more efficient fighting unit.

This year we are requesting 20 new ships: an attack carrier, 3 guided missile frigates, 2 guided missile destroyers, 3 nuclear powered attack submarines, 3 fleet ballistic missile submarines, 1 amphibious transport dock, 2 escort vessels, 1 fast combat support ship, 1 combat store ship, 1 oceanographic research ship, 1 escort research ship, and 1 deep diving auxiliary submarine. We are requesting the conversion of 14

destroyers to continue our urgent fleet rehabilitation and modernization program and conversion of the auxiliary submarine *Albacore* is also included.

The most important and the most essential ship in this program is the attack aircraft carrier. As you know, the Navy's mission is control of the seas, and now and for the foreseeable future the means with which to accomplish this mission are surface ships, submarines, and aircraft. The carrier is simply one of our tools, but the most important one we have. If we could maintain sea supremacy with anything else, the carrier would not be in this budget. At the present time and for the foreseeable future, however, there is no better tool, no more potent weapon system, for control of the seas. No other type of ship can range as far with such a powerful variety of weapons and such precise means to control and deliver them on target.

In the fiscal year 1960 budget, the Congress provided $35 million for long leadtime items for a nuclear-powered carrier in fiscal year 1961. The Congress has thus acted to provide a carrier in fiscal year 1961. The President has recommended the construction of a carrier in his fiscal year 1961 budget message. The Navy needs this carrier. A new carrier is a requirement of national defense regardless of the type of propulsion.

As I mentioned earlier in this statement, budgetary considerations have forced us to review and weigh most carefully the inherent advantages of the nuclear-power carrier against the additional cost involved in its construction. The nuclear-powered carrier would cost about $130 million more than an oil-powered carrier. We can build into a conventionally powered carrier all of the improvements that have gone into the nuclear-powered carrier *Enterprise* now under construction except the nuclear plant. We will have the improved ship size and handling characteristics of the *Forrestal* class which has proved to be necessary for handling today's modern aircraft and those we are building for the future. The funds gained in building this CVA with a conventional rather than a nuclear powerplant have been applied in this budget to the procurement of other badly needed ships, aircraft, and missiles for the Navy. Accordingly, we earnestly request the Congress, and, more specifically, this committee, to modify its decision insofar as the nuclear powerplant of the new carrier is concerned. We request that we be authorized to build a conventionally powered carrier and apply the funds appropriated last year to its construction. We also request the Congress to appropriate the remainder of the funds this year to complete its construction.

Rather than take up more of the committee's valuable time on further details of the carrier today I respectfully request the permission of the chairman to submit a detailed statement for the record and for the consideration by the members of this committee. I also have an attack carrier presentation available should this be desired.

(The document referred to, entitled "The Attack Aircraft Carrier," follows:)

THE ATTACK AIRCRAFT CARRIER

Last year the Congress approved a new attack aircraft carrier and appropriated $35 million in the fiscal year 1960 budget for preprocurement of long leadtime items. This carrier is urgently needed. Included in the fiscal year 1961 shipbuilding bill is a request that the $35 million appropriated last year be applied toward fully funding a chemically powered aircraft carrier so that the keel may be laid down as soon as practicable.

The various statements made during the 1st session of the 86th Congress by officials of the Navy Department with respect to the essentiality of this carrier to the Navy's future strength remain valid.

It is the single most important element of the shipbuilding program proposed for fiscal year 1961.

Before recapitulating the points which establish the vital character of this attack carrier in the current budget request, a preliminary word about the status of the $35 million long leadtime money appropriated in the fiscal year 1960 defense budget is in order.

As is well known, these funds were earmarked specifically for preprocurement items peculiar to a nuclear-powered attack aircraft carrier. Subsequently, a very careful reexamination, from a military point of view, of the desirability of providing nuclear propulsion in this ship was conducted. After the most thorough and deliberate weighing of the advantages to be gained versus the added initial cost for nuclear propulsion, it was concluded that a conventionally powered aircraft carrier would fulfill all the essential military requirements for a carrier without any compromise whatsoever of its aircraft-operating capabilities. In addition, a carrier with oil-fired boilers would meet the urgent need for a modern attack carrier.

The difference in cost, with the consent of Congress, will be applied to other essential naval ship construction, aircraft, and missiles programs to meet growing obsolescence in other Navy combatant forces. None of the $35 million appropriated for the new attack carrier has been apportioned to the Navy pending an affirmative decision by this Congress that the characteristics of the carrier already approved in principle may be partially modified, in the interest of national economy, to substitute conventional propulsion for a nuclear plant.

The Navy wishes to emphasize that this course of action will in no way affect the modernity of this ship insofar as its aircraft operating capabilities are concerned. It will incorporate all of the most advanced aviation features, facilities, electronics, and arrangements that modern technology can provide. It will be completely capable of carrying out its mission throughout the world. This means it will be able to operate, without restrictions, the most modern combat aircraft the Navy will have in its future operating inventory. Specific points with respect to these vital considerations will be discussed in detail in the remainder of this statement.

Testimony during the first session of this Congress brought out virtually all significant points with respect to the Navy's need for a new attack carrier. The intervening months since that time have not detracted from the sense of the various points made in any way. To the contrary, the complexion of world events in the interim have only served to lend emphasis to the need of the United States for a modern carrier.

There are four vitally important points which should be reviewed and restated. They are:

First, a basic strength in attack aircraft carriers, as the backbone of our naval power, is essential to U.S. security today. They are the lifeblood of U.S. sea supremacy. The requirement for this basic strength in our Navy will continue as far as we can see into the future.

Second, in this ballistic missile age, mobile airbases on the politically free high seas are a relatively invulnerable national asset of major importance in the arsenal of U.S. military strength. This is because ballistic missiles are useful only against targets in a known position. As ballistic missiles are improved in range and accuracy, the value of the Navy's mobile sea-based airpower becomes increasingly great. Similarly, the mobility and inherent firepower of the attack carrier striking force greatly reduces their vulnerability to conventional air attack and other tactical hazards which confront forces at sea in time of war.

Third, in support of U.S. policy, in peace as well as war, it is essential that we maintain attack carriers deployed overseas in our various numbered fleets in the Atlantic/Mediterranean area and in the Pacific. With the carriers we have now, a total of 14 attack carriers is necessary to keep the strength of these fleets at the requisite level and to meet our worldwide responsibilities.

Fourth, the carrier in this year's program is a replacement carrier to enable us to maintain our carrier strength in the future. When this carrier is completed it will replace one of our aging World War II (*Essex*) attack carriers which are rapidly becoming inadequate for the demands of jet aircraft operations in the striking fleets.

CARRIERS ARE THE ESSENTIAL ELEMENT OF U.S. NAVAL FORCES NOW AND IN THE FUTURE

The specific need for attack carriers in the U.S. Navy stems from two general factors:

The first is our need to maintain a continuing position of sea supremacy throughout the major seas of the world. We must be ready in peacetime to meet the requirements of war through a broad spectrum of possibilities.

We must be prepared to control the seas for free world use, and to deny their use to our enemies, in any type of combat from conventional to nuclear war.

In its day-to-day role, now characterized by cold war and waxing and waning crises, the Navy must have modern forces constantly deployed throughout the world. Their major task is to demonstrate conclusively our intention and capability to carry out U.S. policies without regard to weapons or pressures that are arrayed against us.

In the event of war, the Navy must control the sea approaches to the Western Hemisphere, as well as elsewhere in the world when such control is required. It must project our military power overseas and sustain and support it after it is there. It must insure communications with, and support for, our allies and other friendly nations.

The United States is a maritime nation completely dependent for future growth upon the seas that surround us. It is through these seas that we must import a large number of vital strategic raw materials, which we do not have in our natural resources, in order to keep our industries going. Similarly, it is through these seas that we must move the vast majority of our exports and our imports. This trade with our friends and allies overseas is essential to our flourishing economy. More importantly—it is through these oceans, as recent history records, we would have to project our military power into the far reaches of the world in time of future war.

It is significant that most countries with which the United States has alliances—or who are our friends—face on the seas. NATO and SEATO are the outstanding examples of the fact that we are united with our friends throughout the world through maritime confederations. Our bilateral agreements with many Latin American nations are also based upon the same premise. We all have a common link that binds our interests closely together—that is the Sea.

The oceans of the world cover over 70 percent of the earth's surface and the nation which can use these massive expanses as it desires is assured of a continuing place of importance in world affairs.

Our Navy's continuing tasks, then, in either peace or war, have not changed basically with the passing years although technologies have advanced tremendously.

The growing threat from missile firing submarines operating off our coasts could be very significant if enemy submarines were allowed to roam the oceans unimpeded and return to undamaged bases for logistic support. The Navy must not only be ready to conduct a close-in defense against such submarines, but must be able to carry the fight to the enemy at the sources of his seapower.

Thus, another vital function of the attack carrier is its offensive contribution to the war against submarines.

The defeat of enemy submarines is not simple. Antisubmarine warfare is one of attrition. All enemy submarines cannot be knocked out in one blow. The destruction of enemy U-boats once they are at sea is extremely difficult because of the problem of locating them in the vastness of the oceans. Therefore, a most effective method for the ultimate defeat of submarines is to destroy their home bases, their pens, their building and repair yards, and especially their deployed tenders which the enemy will place in locations unknown to us as soon as war starts—and probably before. This is the task of the attack carrier forces—to attack the sources of submarine strength, to mine its exits and, most importantly, to search out and destroy the tenders necessary to its operations at sea. This must be done as early in a war as possible.

Units of our fleet are sovereign territory of the United States, regardless of where they are operating. No international agreements—or commitments—are required for their operation. The Navy has minimum dependence on base rights in foreign sovereign nations and as a result, in wartime, operations would not be affected by changes in attitudes of foreign powers or loss of bases to the enemy. Our naval power, always immediately responsive to the wishes of our Government, represents an economy of investment in military power that is useful across the spectrum of warfare possibilities.

All the talent, effort, and resources available therefore, to the Navy are engaged primarily in the specialized task of maintaining our sea supremacy at a time when sea supremacy is more important to our Nation's survival than ever before in history. The weapons, forces, and tactics required to maintain sea supremacy are undergoing continuous reevaluation by all naval commanders and their staffs. It is the unanimous opinion of the responsible leaders of the Navy that modern attack aircraft carriers, manned by the most modern, high-performance aircraft available, will be indispensable, as far as can be seen in the future, to insuring our position to sea supremacy and for performing all the essential tasks imposed on our Navy in time of war.

There is no other element of our Armed Forces—no other means—to provide the mobile airpower required to insure U.S. sea supremacy. In performing this task the attack carrier striking force provides:

Local control of the air over our ships at sea, as well as over important ocean areas;

The ability to search out and destroy enemy ships at sea;

The airpower to locate and strike the sources of enemy naval threat to our control of the seas;

The striking power to seize advance naval bases essential to the conduct of antisubmarine warfare and other naval missions, and for assisting in the defense of such bases as may be necessary in far-flung areas of the world;

The eyes of the fleet—the search and reconnaissance vital to naval operations—as well as the air early warning essential to the defense of forces at sea.

The attack aircraft carrier is not in competition with any other U.S. weapons system because it, and it alone, is the foundation of our sea supremacy.

The second factor demanding adequate carrier strength is related to our basic national policy—the policy that assistance to the free nations of the world is essential to our own national security—a policy that demands a strong limited war capability.

Unlike the Sino-Soviet bloc—now confined to the Eurasian Continent—the United States is bound to her many friends and allies by the common bond of the sea. Most nations have signed mutual defense pacts with the United States despite the fact that they are situated in positions continuously exposed to Communist attack. These nations have staked their future on the ability and determination of the United States to come to their assistance if they are attacked, or if their freedom is threatened through limited military actions.

In support of this national policy, the United States must maintain mobile forces deployed in critical areas overseas. It must have the capability to put elements of its armed strength ashore against opposition quickly and to transport the men, weapons, and supplies necessary to sustain them.

Attack carrier striking forces, by a combination of naval airpower defense in depth, integrated logistic support, and unrestricted mobility over the surface of the ocean, provide the offensive means by which our armed strength can be put ashore against enemy opposition in most strategically important areas of the world. Carrier-based aircraft provide reconnaissance, interdiction, air superiority, and close tactical support when any of these may be required. Of vital importance, they have the capability of using either conventional or nuclear weapons.

Attack carriers are vital to amphibious assault. The ability to land our troops ashore against enemy resistence would be impossible without carriers to provide support for the amphibious forces in the objective area. In fact, the mere presence of a modern attack carrier force at the trouble spot may often be enough to deter hostile aggression during a local crisis.

Piloted aircraft are required for such tactical missions. Ballistic missiles cannot fullfill the requirement. Only trained pilots on the spot can identify and attack with precision the variety of fixed and moving targets which must be countered in tactical situations requiring precision.

Land-based tactical aircraft also have this precise attack capability. However, in many places in the world the lack of suitable staging bases, as well as the absence of airfields in the combat area, to provide timely logistic support, would preclude their early use. In many world areas, airfields would have to be secured and defended before land-based tactical air could be brought to bear effectively against the enemy. This takes time when time is critical. Small military flareups must be controlled quickly if limited wars are to be kept limited.

The attack carrier striking force is indispensable for coping with limited war situations, and may be the country's only effective means of dealing with this type of action in many areas of the world. In the event of a nuclear general

war, U.S. naval striking forces dispersed at sea may be the only U.S. forces which survive the initial onslaught with sufficient combat power and organized vitality to continue to fight—and win.

MOBILITY IS THE KEY TO SURVIVABILITY IN THE NUCLEAR MISSILE AGE

The second main point referred to above is related to the relative invulnerability of the attack carrier, particularly to ballistic missiles. The relative invulnerability of a carrier at sea can be better understood when it is realized that ballistic missiles require fixed targets with known locations to be effective. The position of a carrier at sea is neither known nor fixed.

It is, of course, a fact that any present day military target can be destroyed if the enemy can put against it, with some precision, a nuclear weapon. This applies to aircraft carriers just as it does to any other kind of military target. However, the paradox of the ballistic missile age is that targets with inherent mobility, targets that are on the move, are in preferred positions with respect to vulnerability. In fact, the aircraft carrier has become less vulnerable to ballistic missile damage than it was to attack by manned aircraft. This is a direct dividend of its mobility as well as its concealability from electronic detection systems. This can be appreciated from a study of the accompanying radarscope photograph.

It is a picture of the radar return from the western portion of the Mediterranean on a typical day. It encompasses an area of 196,000 square miles. It is uncluttered by any defensive electronic countermeasures such as decoys, chaff bombs, etc., which would increase the number of apparent targets. Nevertheless, under these ideal conditions, it shows less than 25 percent of the total number of ships which were actually at sea in the area at the time. In this picture someplace are the ships of the 6th Fleet, including two attack carriers—but which ships are they?

It is from information of this type that an enemy radar equipped aircraft would attempt to relay back to his base the precise position of our aircraft carriers in order to prepare ballistic missiles for launch against them.

Based upon the unlikely presumption that such an ideal radar picture could be obtained by the enemy reconnaissance aircraft without opposition from our own fighters, even an expert photo interpreter would find it virtually impossible to pick out the "blips" which are the aircraft carriers But, should a chance guess single out a carrier, a minimum of an hour must elapse before all the necessary information could be collated, introduced into the launching system and the enemy missile reach the objective area. During this period, the carrier will have moved in an unpredictable direction as much as 30 miles from the predetermined (as of the moment of firing) point of impact of the missile. The missile will have been expended against a target that is not there.

A study of the best available data indicates the carrier will continue to enjoy at least the same amount of invulnerability when reconnaissance satellites become operational. The same target identification and mobility problems will confront the enemy then as now.

This then, is why the Navy says with confidence that the carrier at sea is invulnerable to ballistic missile attack. The number of missiles required to gain an acceptable kill probability on a ship at sea through saturation techniques becomes so exorbitant that it cannot seriously be considered as a threat to the attack carrier.

The same is true with regard to air attack with air launched missiles or bombs carried by conventional aircraft. The modern detection capabilities of the attack carrier and the ships that support it are improving rapidly. Our high performance manned interceptors embarked in the carrier itself, along with our already potent, and growing, surface-to-air missile capabilities in our combatant ships provide a level of defense against air attack which is very high in comparison to other air defense systems. This has been recently demonstrated once again, in exercises under realistic conditions at sea.

The defense of the carrier task force against submarines is complicated, particularly when nuclear submarines are introduced into the Soviet Navy. But again, speed, mobility, atomic depth bombs, and longer range detection equipment have provided a vast improvement in the survivability of our naval ships at sea. To this must be added the offensive power of our highly specialized "hunter killer" antisubmarine forces on the prowl in suspected enemy submarine operating areas.

If, however, the attacking submarine has successfully evaded all the forces opposing him, and has been able to separate the carrier from the other ships comprising the dispersed disposition it must then obtain a favorable position for firing.

Be it a nuclear or conventional submarine, this is a difficult and hazardous task against a target steaming at 30 knots on random and unpredictable courses.

It is axiomatic that a surprise underseas attack against all the naval targets at sea is impossible. But should the Soviets attempt to destroy as many of our ships as possible in the initial phase of a war they would use all the submarines available to them. This in turn, will require an early, massive reconnaissance effort in order to learn the general location of the targets. Such submarine deployments cannot go undetected and would provide clear early warnings to this country of impending war.

In addition to all of these considerations, the very hardness of the hull of a modern attack aircraft carrier, and for that matter any other combatant ship, affords great protection against nuclear warfare explosions of all but the direct or near-miss type. The hulls of these ships can withstand high overpressures since they are already designed to resist the mighty pressures of the sea. Good protection is afforded, inherently, to personnel from thermal effects. And our installed washdown systems, with as much water as they need readily available, can cope with high levels of radiation.

All in all, the attack carrier striking forces are most difficult targets.

A TOTAL OF 14 ATTACK CARRIERS IS NEEDED NOW

The third major point is that 14 operating attack carriers are needed in the fleet to enable the Navy to meet its worldwide responsibilities.

Attack carrier striking forces contribute across the board to U.S. military posture necessary to meet cold war, limited war, general war, situations in four major ways:

First, they are our only means of keeping U.S. airpower deployed in critical world areas during cold war without dependence upon base rights in foreign nations which may be wavering in their national determination to oppose Sino-Soviet aims.

Secondly, and as a corollary to the first, they are our most dependable means of deterring limited wars because of their availability and readiness for stabilization of crises in critical areas. Furthermore, they are also capable of contributing heavily to the prompt containment of limited wars should such wars occur. Because limited war could easily erupt into general war, attack carrier striking forces are, therefore, a most significant indirect deterrent to all-out nuclear war.

Third, they are an important aspect, in their own right, of the U.S. capability to deter all-out war because they can be ready to launch nuclear weapons on very short notice and are relatively immune to enemy ballistic missiles.

Lastly, should all-out war occur, they could and would contribute heavily to the U.S. nuclear retaliatory strike effort.

Thus, attack aircraft carriers are of great importance across the entire range of warfare possibilities—from cold war to actual combat—in the order in which they are most apt to occur.

Therefore, there must be enough attack aircraft carriers in the Navy's operating forces to provide the offensive backbone of each of the numbered fleets which are deployed and operate as the principal segments of the naval components of the several worldwide JCS unified commands. These are, first of all, the two numbered fleets of the U.S. Pacific Fleet: the U.S. 1st Fleet in the Eastern Pacific and the 7th Fleet in the Far East, both under CINCPAC.

The 2d Fleet is the major offensive force of the U.S. Atlantic Fleet and it operates in the Atlantic under CINCLANT. The U.S. 6th Fleet, in the Mediterranean, is part of CINCNELM's forces who, in turn, is the naval component commander under CINCEUR.

The purpose of the attack carriers in the numbered fleets is to provide these commanders with a capability for maintaining a sea-based readiness for stabilizing cold war crises, for containing and fighting limited wars, and in the final analysis, for contributing to the prosecution of all-out general nuclear war.

The Navy now has 14 attack carriers in commission. Of these, eight are assigned to the U.S. Pacific Fleet for deployment, under CINCPAC, with the 1st and 7th Fleets.

Specifically, three are now deployed in the Western Pacific with the 7th Fleet to the maximum extent practicable. However, it is not always possible to keep three attack carriers in the Far East and at the same time meet requirements for ship upkeep, overhaul, training, and crew rest. At times, therefore, it is necessary to reduce the carriers in the 7th Fleet to two.

It must be emphasized that the 7th Fleet is of critical importance to the stability of the Far East. Distances are very great and U.S. facilities are limited. The area contains, moreover, a large portion of critical world hot spots. If the carrier forces of the 7th Fleet were withdrawn from the Far East, a strong deterrent to Communist aggression would be removed.

One of the eight Pacific attack carriers is ordinarily in overhaul at any given time. The remainder of the ships are deployed in the Eastern Pacific, either as a part of the 1st Fleet or in training. The 1st backs up and augments the 7th Fleet as required. In addition, the 1st Fleet also provides the Nation with a capability for limited operations in the Indian Ocean.

Six of the Navy's fourteen attack carriers are assigned to the U.S. Atlantic Fleet. These provide for continuous deployment of carriers in the 2d and 6th Fleets under CINCLANT and CINCEUR, respectively. Two are kept continuously in the 6th Fleet in the Mediterranean and are relieved on station periodically.

The 6th Fleet is an essential part of free world strength, supporting NATO ties of Italy, Greece, and Turkey. This fleet is also a powerful stabilizing influence in the Middle East. If the carrier strength of the 6th Fleet were withdrawn, or reduced, Soviet bloc naval power would fill the vacuum with disastrous effect on free world security.

One of the remaining Atlantic Fleet carriers is, as in the Pacific, ordinarily in overhaul at any given time. The remaining three ships are deployed in the Western Atlantic either as part of the 2d Fleet or in training. The 2d Fleet augments and supports the 6th Fleet and has extremely important combat missions in the vital North Atlantic.

Thus, in both Pacific and the Atlantic, rotation of assigned carriers through training cycles, deployments with the numbered fleets, and upkeep and overhaul periods, permits maximum utilization of operating carriers to meet farflung responsibilities with very little margin to spare.

One factor that is important is understanding why at least two carriers for each striking fleet are required; this has to do with the aviation fuel capacity of attack carriers.

In periods of great crises, which may lead to limited war, experience has shown a minimum of 108 fighter (VF) and air early warning (AEW) sorties per 24-hour period are required to be flown around attack carrier striking forces to maintain an adequate alert posture. This involves keeping an average of six VF and two AEW aircraft airborne around the clock, but does not include attack sorties since, in the assumed situation, no strikes are being made.

The aviation fuel capacity of a modern attack carrier will allow one carrier to fly about 150 sorties per 24-hour day for a limited period of time. This, of course, would meet the alert requirement with a small capability per day to spare. At the end of this time, however, replenishment of aviation fuel from the mobile logistic support forces must take place. If there were not a second carrier present at this time, no flying could be done.

With two carriers in company, and by staggering replenishment periods, it's obvious that not only can the minimum required number of sorties be carried out indefinitely, but the force always has a very significant cushion of sorties per day available to meet aggravated situations. Thus, two carriers operating in the same general area are about four times as effective as one alone.

If a shooting war should develop from such a situation, attack and other sorties would be undertaken and the tempo of flying could increase to about 300 sorties per day between the 2 carriers.

Two carriers per striking force, therefore, provide staying power, flexibility, and integrity to an attack carrier striking force.

The typical employment schedule for attack carriers is revealing. The planned 3-year operating cycle for each carrier provides for its being in overhaul for one 4-month period. It is deployed in the Atlantic or Pacific for training or for employment in the 2d or 1st Fleets for a total of 20 months. It is deployed to the Mediterranean or Far East for duty with the 6th Fleet for a total of 12 months, in two separate deployments.

Training periods are very important. Because of personnel turnovers, a ship must spend considerable time periodically in qualifying and refreshing its air group and in conducting air group/ship operations to meet prescribed readiness criteria for conventional and nuclear war.

Planned employment schedules are discarded in emergencies to meet the threat.

At the peak of the 1958 Lebanon-Taiwan crisis, for example, the accelerated attack carrier readiness posture achieved with the 14 CVA's in the Navy was as follows:

Five were on station in Asian waters, three were on station in the Eastern Atlantic/Mediterranean area, one was in the mid-Pacific and three more were at sea off the U.S. coasts ready to provide additional backup as necessary. One on each coast was in overhaul.

The 14 attack carriers in the Navy are meeting today's cold war functions. They assist in maintaining stability in the Mediterranean and in the Far East where the Communist threat is increasing, as indicated by recent events in south and southeast Asia. These carriers are capable of meeting limited war situations and would participate importantly in a general conflict.

The Navy's 14 operating CVA are composed of *Essex*, *Midway*, and *Forrestal* class ships (Jan. 15, 1960):

8 "ESSEX"	2 "MIDWAY"	4 "FORRESTAL"
Shangri-La	F. D. Roosevelt	Forrestal
Oriskany	Midway	Saratoga
B. H. Richard		Ranger
Hancock		Independence
Lexington		
Ticonderoga		
Intrepid		
Essex		

Thus, about 60 percent of the Navy's present active attack carriers, the *Essex* class, were built during World War II. They are aging fast and simply wearing out. It is an accepted standard among naval constructors, including merchant marine, that a ship's useful life span, when confronted with a fast tempo of operations, is about 20 years. The *Essex* class carriers have been forced to steam at very high speeds in order to compensate for the limited capacity of their old catapults and arresting gear to support the new, fast, and heavy jet aircraft which have come into service use. These strenuous operations at full throttle and maximum catapult pressures over a number of years have put a severe strain on the *Essex* class hulls and engineering plants.

To overcome some of these limitations, an aggressive conversion program was designed and followed in the last 10 years to increase the jet aircraft operating capabilities of the *Essex* class. But the limit has been reached in this direction. Conversions cannot make the ships younger or give them greater size. Nor is it economically sound to replace all of their miles of wiring, aging pumps and motors, and faltering engines. The demands placed on old equipment for continuous operation at maximum output result in breakdowns that affect both combat readiness and safety in the *Essex* class. Their flight decks have been weakened by the inordinate poundings given them by the heavy fast aircraft for which they were not designed. This is the critical situation that confronts us today.

With the advancing age of our remaining *Essex* class attack carriers and growing difficulties with hull conditions and old machinery, it is becoming increasingly difficult to meet commitments.

(*a*) A recapitulation of the Navy's current carrier building and modernization program is as follows:

Three modern replacement CVA's have been authorized and are now building:

(1) *Kitty Hawk*—authorized fiscal year 1956—join fleet after shakedown in early 1961.

(2) *Constellation*—authorized fiscal year 1957—join fleet after shakedown in late 1961.

(3) *Enterprise* (nuclear)—authorized fiscal year 1958—join fleet after shakedown in 1962.

(*b*) One *Midway* class (*Coral Sea*)—a World War II designed ship—is now completing modernization and will replace an *Essex* in the spring 1960. Accordingly, the Navy's attack carrier inventory in 1962 will be as follows:

1962

1	Enterprise (CVAN)	3	FDR Midway Coral Sea
6	Independence Ranger Saratoga Forrestal Constellation Kitty Hawk	4	Essex class

This means there will be four CVA's remaining in the fleet incapable of handling modern aircraft. When the Navy has 11 new carrier decks in the fleet, it is possible that it can do the jobs it has to do with 11 attack carriers. Of these 11 modern aircraft carriers, 5 would be in the Atlantic and 6 in the Pacific. Of the five Atlantic carriers, two would be deployed in the Atlantic with the 2d Fleet and one would be in overhaul or preparing for deployment. In the Pacific, with its far greater areas to traverse, two would be deployed to the western Pacific with the 7th Fleet, two would be deployed with the 1st Fleet and two would be in overhaul or preparing for deployment. A minimum of two attack carriers is needed in each deployed fleet to provide the offensive power and sustained action required for effective combat operations.

The foregoing would not provide for training or replacement pilots for the carrier air groups. It is visualized there would be two nondeployable carriers, one each in the Atlantic and Pacific, with the sole mission of training.

Thus, with 11 modern attack carriers and 2 training carriers for a total of 13 attack type carriers, the Navy may be able to do the jobs it must do in the 1970 era.

As *Essex* class are replaced they will be redesignated as antisubmarine carriers (CVS) and, in turn, will replace older ASW carriers, keeping that specialized category of ships at the authorized level of nine. The ASW carriers so replaced would be placed out of commission in reserve or disposed of as their condition warrants. In this connection, it is important to note that the Navy is very sensitive to the need for keeping our air ASW forces up to date. These not only provide naval forces at sea special defense against submarines but also are employed extensively for defending our coastal approaches against marauding enemy submarines. Since the characteristics of ASW aircraft, insofar as performance is concerned, are not so demanding in terms of ship size and facilities as are attack aircraft, it is possible to operate them from our older *Essex* hulls. As *Forrestals* and modernized *Midways* have become available during recent years, the best of the *Essex* class ships have been chosen and assigned to ASW duty. In this manner we have been able to maintain both our attack carrier strength and ASW carrier strength at the requisite levels with a single carrier building program. We will continue to replace our ASW carriers with the best *Essex* class ships we have available to us. By this means we will maintain our ASW carrier forecs at adequate strength for the immediate future.

THE FISCAL YEAR 1961 ATTACK CARRIER—A MODERN SHIP

The fourth, and final, main point relates to the characteristics which the attack carrier requested in this budget should have. This shall be discussed in two parts: (1) Size required and (2) propulsion system and cost considerations.

SIZE REQUIRED

We learned in Korea that the Chinese Communists were equipped with—and knew how to use—the most modern combat aircraft Soviet technology had produced up to that time.

Furthermore, we are aware that the Soviets are engaged in an extensive program to equip all of their satellites, allies, and others with ever-increasing numbers of up-to-date machines of war. This includes combat aircraft, as well as other armament of all descriptions, for Soviet bloc sea-based and land-based forces.

U.S. forces which may have to be employed in wars of lesser objectives than those of all-out war must by all means be capable of competing successfully against the enemy equipment with which they will be in combat; that is, the most modern enemy military equipment—with or without nuclear weapons.

The paradox of nuclear stalemate lies in the essentiality of maintaining a modern conventional weapons capability. When this can be done within forces that also have nuclear weapon capabilities, the advantages are manifold.

It is this philosophy which has governed the evolution of naval ships and aircraft, as well as associated tactical doctrine. We know that maintaining a position of sea supremacy for the United States dictates that our forces be designed to handle the most demanding tasks that could confront them across a broad spectrum of possibilities.

While developing and retaining a strong capability to compete directly against forces under the Russian flag with nuclear weapons, we have not forgotten that other kinds of conflict could develop which would be, in terms of local combat effort required, just as exacting.

The Navy has striven for flexibility in its forces as well as a plateau of equipment modernity that can support whatever effort is required now and in the foreseeable future.

As to the specific question of attack carrier size which is needed to meet our basic philosophy, modern attack carriers are necessarily significantly larger than those of World War II. The magnitude of this growth is reflected in the following comparison of gross weights:

Essex—A World War II designed and built class grosses about 40,000 tons.

Midway—A World War II designed class grosses about 60,000 tons.

Forrestal—A modern class carrier grosses about 77,000 tons.

The question is: Why are they bigger? The corollary is: Do they really need to be?

These questions have been studied by responsible officials in the Navy Department. Extensive research has been done by the Bureau of Ships to make sure our new carriers are no bigger than they need to be.

Briefly, the answer to the "Why are they bigger?" question is related to the size, complexity, and performance of present-day aircraft. The answer to the question "Do they really need to be?" is "Yes."

The prescribed mission of an attack carrier is "to support and operate aircraft to engage in attacks on targets afloat or ashore which threaten our control of the seas and to engage in sustained operations in support of other forces."

The three most important points in this short statement lie in the words "to support," "to operate," and "to engage."

Advancing technologies in the past decade have resulted in bigger, heavier, more complex aircraft with vastly improved performance over airplanes of World War II and Korean vintage.

Attack carrier aircraft performance trends since 1948 are shown in the following table:

Year	Typical model aircraft	Maximum speed (knots)	Approximate carrier approach speed (knots)
1948	F9F	400+	100
1954	F[illegible]	500+	125
1957	F8U	800+	135
1960	F4H/A3J	1,300+	140

The table clearly indicates the trend in both maximum speed performance and in speeds required for approach for landing aboard a carrier. The latter is a critical factor in the design of attack carriers. It should be noted that this trend now tends to flatten out. Further increase in approach speeds are not expected since current developments in aerodynamic design will preclude any significant increases in approach speeds of future carrier aircraft.

The airframe growth of carrier-based aircraft is reflected by these data: In 1950 the heaviest aircraft at its maximum weight weighed 50,000 pounds; and there were only a very few in this category. In 1955 we started equipping the fleet with some airplanes which are now launched at weights up to 75,000 pounds; these will be with us for some time in relatively large numbers. In the 1960–65 period our heaviest new aircraft will weigh approximately 60,000 pounds. This reduction in future gross weight has been achieved in part through improved design techniques but especially from improved weapons which allow smaller attack aircraft to deliver nuclear or conventional weapons with increased efficiency. However, landing speeds are higher for these new aircraft than they were in the past.

The heaviest of the carrier-based aircraft are in the attack category, but there has also been a very significant increase in fighter size and weight. The newest of the Navy's high-performance fighters will weigh over 45,000 pounds at takeoff.

Present concepts of proper carrier design, therefore, are matched to the expected trend in aircraft performance in the takeoff and landing configurations as well as to the facilities required to operate the proper numbers of them effectively and safely.

Carrier overall flight deck length has increased from about 866 feet in 1942 to about 1,025 feet today—an 18-percent increase in length. This has provided the longer runway lengths required for the new aircraft now in operation.

In this connection, it is interesting to reflect that land-based runways have gone from about 5,500 to over 11,000 feet during the same evolutionary period—a 100-percent increase in length.

The increase in flight deck size of modern ships to handle high performance aircraft has also permitted installing four catapults instead of two—with individually much higher capacity. In addition, modern ships now have four elevators for moving aircraft between flight and hangar deck instead of three. Again, these modern elevators are of higher capacity and are better located than in our 1942 ships.

There is nothing mysterious, unique, or super about the growth of these ships during the 1952–60 era. It has been a natural growth to keep pace with known and expected technological advances in aviation.

There have been many specific improvements, aside from size alone, in carrier design which enhance the capabilities of present-day ships over those of the past. Foremost among these is the angled deck which, in effect, provides separate runways for takeoffs and landings and which permits these latter operations to be conducted concurrently. This is a major advance in carrier effectiveness.

Furthermore, the geometry of the angled platform effectively provides longer runways on a given overall hull length than could be achieved if the outmoded axial deck is used. In addition, the angled geometry provides more square footage for parking, spotting, and handling aircraft on the flight deck. A ship of the *Forrestal* class, for example, has 71 percent more flight deck space than World War II ships.

The angled deck has been installed in our older ships as part of our modernization programs to extend the useful life of these hulls. Although these investments have paid continuing dividends and accomplished the purpose, the most effective marriage of angled deck geometry and hull size has been found in ships of the *Forrestal* size. Here the payoff becomes large.

Aircraft loading

[In percent]

	Essex	*Forrestal*
Fighters	100	100
Attack	100	150
Recco/air early warning	100	100
Total	100	120

A *Forrestal* size ship supports 20 percent more total aircraft with the present "mix" of aircraft in attack carriers. Most significant, however, is the fact that the improvement in aircraft capacity is exclusively with the attack aircraft—50 percent more. Fighter aircraft requirements are constant regardless of carrier size—therefore, gains or losses, in carrier effectivity because of size will always be reflected in the attack category.

The size of the *Forrestal* class with its increased flight deck area, and additional handling facilities, also provides for faster and more efficient flight operations. For example, in sustained flight operations an *Essex* size requires twice as much time as a *Forrestal* to launch a given number of aircraft. To turn around a given number of aircraft—that is to rearm, refuel, and respot them for next launch—the small ship also requires about twice as much time as a *Forrestal*. It is in this area that additional elevators, properly located, and more catapults in modern ships have paid off.

All of the factors discussed so far are important from the combat potential viewpoint and provide for overall effectiveness in attack carriers. However, there are certain basic criteria which actually dictate the length of the landing and takeoff runways of modern attack carriers. These are considerations which, even in isolation from aircraft carrying capacity and operating effectiveness would tend to fix the flight deck dimensions of a carrier which must operate modern, high performance aircraft. This optimum flight deck size, in turn, will tend to fix overall ship length and establish hull requirements associated with good seakeeping qualities.

Modern aircraft should approach the touchdown point on the flight deck at a glide path angle no greater than 2.5° and with a hook to ramp (after end of flight deck) clearance of no less than 11 feet. These are the criteria for new carrier

designs. These two factors provide for an acceptable rate of descent at impact as well as a margin of safety for the aircraft over the ramp when the deck is pitching. By proper setting of the optical lens system—that is, the mirror landing system—an optical glide path is established for the pilot, which will produce the desired glide angle, hook to ramp clearance, and allowable vertical rate of descent.

The 11-foot hook to ramp clearance, with a 2.5° glide angle fix the optimum hook touchdown point at about 250 feet from the afterend of the flight deck. This distance is known as the approach area (labeled (1) in the diagram.

A four-wire array, with the arresting wires spaced 40 feet apart, gives the best arresting efficiency within a reasonable space—120 feet. The arresting wire array is labeled (2) on the diagram. The third wire of this array is located just forward of the hook touchdown point. This arrangement compensates for errors, both plus and minus, in the aircraft's touchdown point induced by a pitching deck or by the pilots' inability to stay exactly on the glide slope.

After hook engagement has been effected, flight deck space is required to permit the wire to run out and decelerate the aircraft to a stop. This is termed the "arrestment area," and is labeled (3) in the diagram.

The length of inherent runout of the arresting gear determines allowable hook engaging speed and aircraft design deceleration. These factors, then will tend to establish design criteria for carrier aircraft—if permissible runout is small—the aircraft will have to be stronger, and therefore, heavier with performance penalties.

Modern arresting gear is of a constant runout type. That is, for high performance aircraft, regardless of aircraft weight or engaging speed, the wire runout will always be the same. The distance required in which to permit this stopping process to take place has been established through experience, as 350 feet for the latest designs. Arrestment in this distance represents the best compromise of energy absorption built into the ship, and the designed longitudinal deceleration strength of the aircraft and a margin of safety. For example, if arresting runout were decreased by 50 feet, approximately 20 percent additional longitudinal design strength would be required in the aircraft. This, of course, would result in size and weight penalties.

It is readily apparent that the distance of 350 feet for arrestment must be provided forward of the last wire in the array in order to make all wires completely usable.

Ahead of the arrestment area, space must be provided to taxi the aircraft off the angled deck into the parking area. To establish this space requirement, known as the turnoff area, and labelled (4) in the diagram, two factors must be considered: the length of the longest carrier aircraft, and a turning radius which will allow the aircraft to taxi out of the way of following aircraft. By adding 70 feet, the approximate length of the largest aircraft and 40 feet, representing a typical turning radius we establish that 110 feet are needed for the turnoff area.

Then, adding up the landing runway component area dimensions: 250 feet for the approach area, 40 feet for the forward third of the landing area, 350 feet for the arrestment area, and 110 feet for the turnoff area, a total of about 750 feet is derived as the length required for the angled deck.

This, however, is only part of the story: the launching area, labelled (5) in the diagram, must be coupled with the landing area to establish the overall flight deck dimensions.

The required size of the aircraft launching area is primarily determined by the catapult installations. Catapults are mandatory for launching operations because of the slow acceleration characteristics inherent in jet aircraft. Catapults must also be provided in sufficient numbers to attain launching flexibility, a high launching rate, and to insure a backup capacity in the event of a catapult casualty. To meet these requirements modern carriers must have four catapults—two forward in the bow and two in the waist.

Catapult capacity is the product of the force it applies times its stroke. Hence, dimensions of the ship's launching area are once again a compromise involving catapult characteristics and the performance and design criteria of the aircraft. The catapult must have sufficient length to accelerate heavy aircraft to safe flying speed within practical limiting values of force applied to the airframe.

The latest catapults have a total installed length of 273 feet. Therefore, a bow extension of about 270 feet forward of the angled deck is required.

Lateral spacing of catapults is determined by the wing tip to wing tip, and wheel to deck edge clearances necessary to spot two aircraft simultaneously on the forward catapults.

When the 270-foot requirement for launching space is added to the 750 feet of landing space required, we have a flight deck of a little over ,000 feet in length.

A reduction in size of any one of the component areas described (approach area, arrestment area, turnoff area, parking area, launching area) would seriously impair the carrier's ability to operate modern high performance aircraft.

For example, the length of the approach area can be reduced only by decreasing the hook-to-ramp clearance, an unacceptable measure from a safety consideration, or by increasing the glide angle, which would result in impractical aircraft sink rates and in redesign of all aircraft to increase their strength. This, in turn, would decrease their performance.

The effect of shortening the arrestment area would be similar. A reduced runout would overstress current aircraft, and in the extreme, the pilots. As far as future aircraft designs are concerned, there would be immediate performance penalties stemming from additional structural tolerance required to withstand greater longitudinal deceleration.

A reduction in the length of the arresting wire array would result in an increased number of bolters, or failures to engage wires where the pilot must make another attempt to land. The bolter rate is at its maximum allowable now, about 12 percent on the average. This would cause an unacceptable deterioration of operational efficiency due to missed approaches, require greater landing fuel reserves, and could result in the loss of some aircraft unable to effect a successful arrestment after several tries in the smaller target area.

The improved efficiency and performance in air operations which results from a carrier flight deck of the size and with the improved facilities of the *Forrestal* class is concretely demonstrated by the safety records of these ships in comparison with the records of the smaller decks representative of the most modernized versions of the World War II *Essex* design.

The following table compares the landing accident rates of these two classes of carriers for the 3-year period from July 1, 1956 to September 30, 1959:

Landing accident comparison—Period July 1, 1956–Sept. 30, 1959

Carrier class	Landings made	Landing accident rate [1]	Number of strike damage accidents [2]	Number of overhaul damage accidents [2]	Fatal accidents [1]	Landing accident dollar loss [2]
Forrestal size	39,124	12	7	15	0.8	$13,109,600
Essex size	65,487	20	37	29	2.7	49,417,200

[1] These data are rates per 10,000 landings.

[2] These data are actual numbers experienced over the 3-year period. The term "strike" when used in this sense means damage to the extent that repair or overhaul is not economically feasible.

From an examination of these statistics, it is evident that:

Operating similar aircraft, the *Forrestal* class carrier has approximately 60 percent of the landing accident rate of the *Essex* class.

The *Forrestal* accidents produced only one-fifth of the strikes and one-half the overall damage of the *Essex* accidents. The real significance here is that a crash aboard the *Essex* is usually much more severe than an accident under similar circumstances aboard the *Forrestal*.

The fatal accident rate in the *Essex* class is 3½ times that in the *Forrestal* class.

Not a small part of this improvement in operational safety stems from the increased stability of the flight deck due to the much better seaworthiness of the larger hull of the *Forrestal* class. Because of their excellent seakeeping qualities, flight operations aboard a *Forrestal* class are virtually unaffected by heavy weather. Smaller carriers are forced to suspend operations during heavy sea conditions for safety considerations.

A study of sea states in the Norwegian Sea and the South China Sea, two of the world's stormiest ocean areas, showed that the *Forrestal* class could operate aircraft about 57 percent more than an *Essex* size ship. This ability to operate aircraft in anything short of hurricane conditions gives a meaningful all-weather capability to the *Forrestal* carriers.

As indicated before, the larger hull size of the *Forrestal*, dictated by flight deck size requirements in turn imposed by parameters of aircraft performance and characteristics, provided satellite bonuses in the support and logistic capacities of these ships. For example:

The *Forrestal* class carries three times the ammunition in its magazine in both the conventional and nuclear categories as does the *Essex* class.

The aviation fuel capacity of the *Forrestals* is double that of the *Essexes*.

Therefore, the staying power of the larger ships is greatly superior to the smaller ones.

Finally, one very important factor, difficult to express by specific figures, which contributes materially to the overall operational and combat capability of the carrier and its air group, are the improved habitability, working space, and maintenance facilities available aboard the *Forrestal* class. These factors show up impressively during periods of sustained, high density air operations. After several days of such operations, aircraft availability and crew efficiency aboard the *Essex* class carrier falls off markedly, but the *Forrestal* carriers can maintain a high operational tempo. The reason is fairly simple. There is just not room enough aboard an *Essex* class carrier to simultaneously operate aircraft and adequately perform the exacting aircraft maintenance required by the complex systems which are typical of modern aircraft, while at the same time carrying on the routine of living.

Thus, all factors considered, it has been determined that a modern attack carrier must be of about the *Forrestal* size, and must incorporate comparable aviation features and facilities, in order to insure that the ship is capable of carrying out its mission effectively and safely.

PROPULSION SYSTEM AND COST CONSIDERATIONS

A very great step was taken in power production technology with the successful development of nuclear power. This advance, as an engineering achievement, stands alone. It is significant in any application where thermal energy from nuclear fission can be used to produce electricity or mechanical power. It is, of course, of utmost significance in its application to submarines. Its independence from the atmosphere (a requirement peculiar to submarine propulsion) and its endurance characteristics have provided the submarine a new dimension in which to operate.

Nuclear power does not provide such a significant new military vector in the case of the aircraft carrier. It does not provide a dramatic new mode of operation for the carrier as it does for the submarine. It does provide a greatly increased endurance before refueling, and the capability for long periods of steaming at high speeds. However, because of the aircraft fuel requirement, the tight logistic bonds of hydrocarbon fuels for the carrier are not severed by the use of nuclear propulsion.

For this reason, the military tactics for aircraft carriers are not altered nearly so drastically by nuclear power as are those for submarines.

Experience has shown that seldom is the ultimate tactical use of any new ship known at its concept. Therefore, it is quite possible that, after service experience with *Enterprise*, a requirement for the feature of long ship endurance could evolve which would give this characteristic an overriding importance.

There are no misgivings about the existence of military advantages in a nuclear-powered aircraft carrier. These have been stated before, and are still true. In light of increasingly accurate knowledge of the additional cost, however, these military advantages simply do not compare well with the military potential in other needed areas which can be purchased for this money. The construction cost of the *Enterprise* has been more than anticipated. Submarine experience has shown that the operating and fuel cost is considerably higher than is that for conventional power. In terms of what is bought for submarines, this is still cheap. This conclusion cannot be applied so certainly at this time to nuclear power in an aircraft carrier.

Nuclear power is a tremendous advance in technology, and has an important place in the evolution of ship propulsion. As we learn more about its use with the operation of *Enterprise*, *Long Beach*, and *Bainbridge*, we will be in a better position to access its military worth in these types. It is also possible that improved nuclear technology will reduce relative fuel and installation costs, so that in the future the basic advantages of nuclear power will be more economically attractive as a means of ship propulsion.

The conventionally propelled ship in the fiscal year 1961 budget will be capable of operating three attack and two fighter squadrons. It will have the quantity and types of fuel and ammunition which will make this striking force as potent

as that of *Enterprise*, and more powerful than that of any other carrier. It will have the most modern electronics and the most accurate and powerful radars of any carrier afloat. Its elevators, catapults, and flight operating equipment will be of the required capacity for any aircraft now envisaged. It will provide the most advanced features of seaworthiness. It will be slightly faster than either the *Enterprise* or a new nuclear carrier of corresponding size. In short, it will contain an extremely effective composition of military features which will provide the highest performance and most modern aircraft carrier afloat.

This ship will be capable of steaming halfway around the world at cruising speed. It will be able to operate at high speeds for the necessary periods in all conceivable tactical situations. It will carry large amounts of aviation fuel and ammunition. It will be fitted for rapid replenishment and striking down of fuel and ammunition so that logistic operations will encumber it to the minimum possible extent.

It must be emphasized that the absence of nuclear power makes this ship in no way a "second-rate" or obsolescent ship. It will be a most effective addition to a proven weapon system, the design, construction, and operation of which American naval power has brought to a state of development far surpassing that achieved by any other nation. In this respect, it is a weapons system in which we can take great pride. Our potential enemies would be greatly comforted by the demise of this system. The requirement for this carrier must be fulfilled. The question of the type of propulsion should not be allowed to confuse the central issue of the need for another modern carrier.

When all our current Navy needs are considered, the cold facts are that the difference in the price between a conventionally powered carrier and a nuclear-powered carrier will now purchase us other forms of military capability which are more meaningful in the present strategic setting than that form represented by the increment in capability of a nuclear carrier over a conventional carrier. The difference in first cost for the two ships, practically equal in all respects save nuclear power, is about $130 million. It is perhaps significant that this difference is more than sufficient to construct a nuclear-powered ship in which the benefits of nuclear power provide a large increment in performance. For instance, the difference is more than enough to purchase nuclear-powered Polaris submarine, or two nuclear-powered attack submarines.

It is also significant that this difference can purchase a modern, high-speed, combination ammunition ship and fleet oiler which can carry sufficient ammunition and fuel in one load to extend the on-station endurance of the carrier.

In summary, it is clear that the nuclear-powered aircraft carrier represents an improved technology. The military dividend for surface ships which will accrue from this technology can be fully assessed upon completion of the currently authorized nuclear-propelled ships. Considering the overall needs of the Navy today, the premium for nuclear power in the fiscal year 1961 aircraft carrier can best be used for other clear and present requirements. Meanwhile, the modern, conventionally propelled aircraft carrier will provide a powerful naval weapon which is vital to national defense now and in the future.

BRIEF POINTS ON THE NEW ATTACK CARRIER IN FISCAL YEAR 1961 SHIPBUILDING AND CONVERSION PROGRAM

1. Importance

New attack carrier is considered most important element of proposed fiscal year 1961 shipbuilding program for these four vitally important reasons:

(*a*) A basic strength in attack carriers is essential to U.S. security today.

(*b*) In the ballistic missile age, mobile airbases are a relatively invulnerable military asset to the United States.

(*c*) In support of U.S. policy in peace and war, we must maintain attack carriers deployed overseas.

(*d*) The carrier in fiscal year 1961 program is a replacement carrier for one of World War II *Essex* class.

2. Shortcomings of "Essex" class

They are aging fast and are wearing out.

An aggressive conversion program during past 10 years has increased capability to operate jet aircraft but limit has been reached.

The converted *Essex* class is too small to safely and efficiently operate modern jet aircraft.

3. Comparison between present-day CVA strength and that in 1962 (when all presently authorized CVA's will have joined fleet)

1960	1962
4 *Forrestal* class	1 *Enterprise* (CVAN)
2 *Midway* class [1]	6 *Forrestal* class
8 *Essex* class	3 *Midway* class
	4 *Essex* class

[1] 1 *Midway*-class CVA now undergoing conversion. She will rejoin fleet in spring 1960 and replace an *Essex*.

In 1962 we will have four CVA's incapable of handling modern jet aircraft.

4. Numbers required in the future

While we have need for 14 CVA's today, it may be possible to do same job with 11 new CVA decks and 2 nondeployable training carriers when 11 new carriers are at sea.

5. Utilization of "Essex" class as ASW carriers

When *Essex* class are replaced as attack carriers they will be redesignated as ASW carriers (CVS) and will replace older CVS's now in commission.

6. Necessity for increased size of new carriers

Increased handling complexity and higher landing speeds make longer and stronger CVA decks necessary.

Larger flight decks permit optimum glide angle for hook-to-ramp clearance and allowable rate of descent.

Forrestal class carries more attack aircraft than an *Essex* class and has a much increased parking area.

Forrestal class can launch given number of aircraft in one-half the time taken by *Essex* class.

Forrestal class requires one-half the time of *Essex* class to rearm, refuel, and respot aircraft for next launch.

Forrestal class has only 60 percent landing accident rate of the *Essex* class.

Forrestal class accidents produce only one-fifth of the strikes (aircraft damaged to extent that repair or overhaul is not economically feasible) and one-half the overall damage of accidents in the *Essex* class.

The fatal accident rate in *Essex* class is 3½ times that of *Forrestal* class.

Forrestal class can operate aircraft in any weather short of a hurricane while *Essex* class must reduce or cease flight operations in heavy weather.

Extra fuel and ammo carried by *Forrestal* class gives them almost twice the staying ability of the *Essex* class.

7. Propulsion system and cost considerations

While nuclear power provides a dramatic advance for submarines, it does not provide such a great advance for a CVA.

CVA must replenish its aviation fuel periodically even though nuclear powered.

The $130 million difference in cost is most urgently needed for other ships, aircraft, and missiles.

THE ANTISUBMARINE WARFARE PROGRAM

Admiral BURKE. One of the gravest military threats we face is the powerful Soviet submarine force. Not only does this force present a threat to our sea communications but also it presents a threat to U.S. cities and bases. We know that some Soviet submarines are equipped to fire missiles. Our ASW program, which has been given priority at the highest levels, is designed to give our ASW forces the tools to meet and contain this threat.

Last year, the Congress showed its concern about the submarine warfare threat by directing the Navy to further accelerate its antisubmarine effort, and by providing $137.3 million additional funds for this purpose. Specifically the Congress provided for an additional nuclear-power attack submarine; additional ASW helicopters, weapons

and equipment; and $45 million to accelerate the ASW R.D.T. & E. effort.

This augmented program is being implemented. We expect to have the submarine, helicopters, weapons and equipment under contract before the end of fiscal year 1960.

Added emphasis has been placed on ASW R.D.T. & E. projects desired by the Congress—such as underwater detection, oceanography, submarine communications, noise reduction in submarines and weapons research.

The fiscal year 1960 ASW programs will be continued at an accelerated pace, stressing oceanography, ocean surveillance systems, unique and promising methods of detection and classification (which have indicated some potentialities) and weapon development, including new propulsion systems for high speed, deep diving torpedoes.

Of the 20 new ships in the fiscal year 1961 shipbuilding and conversion program, 13 are ASW or ASW support types. There are three guided missile frigates, two guided missile destroyers, and two destroyer escorts, all with the latest long range sonar equipment, the latest ASW torpedoes and rocket launching systems, and, in the case of the DE's, the DASH system—drone antisubmarine helicopters. Three nuclear attack submarines are to be built. These are considered to be one of the best ASW systems in our ASW arsenal. An experimental deep-diving submarine also is being built to explore the field of deep submergence and its effects on extremely long range detection and attack.

The escort research ship was originally included in the fiscal year 1960 program and has been reintroduced in the fiscal year 1961. The contract design plans could not be made ready for award in fiscal year 1960. Consequently, the funds programed for this ship were reprogramed against the additional costs of the new method of "end costing," to which I have previously referred, and the ship was reintroduced in the fiscal year 1961 program. This will introduce no change in the earliest date that she could be completed and ready to commence her important work in the ASW field, that of determining the best hull forms and mountings for optimum sonar performance in surface ships.

A ship specifically designed for oceanographic research also is to be built. This ship will incorporate the latest equipment and laboratory facilities for all phases of oceanographic research. It will be assigned to and actively support the TENOC program, which is a 10-year planned program to collect basic information on currents, sonar transmission, bottom contours, marine life and other oceanographic matters. This information is expected to exert considerable influence on future design of ASW components and methods of application of components.

In the conversion program are 14 Mark I FRAM destroyers. This conversion, in addition to other improvements, provides for installation of new and advanced sonar equipment and ASW weapons, including the DASH and ASROC systems.

The experimental submarine *Albacore*, which provided the tests and evaluations resulting in a family of high-speed submarines of new hull design, is to be converted to incorporate latest innovations in noise reduction and propulsion to determine if they can be used in our future submarines and thus enhance their ASW capabilities.

In the electronic equipment program we are buying the latest developments in detection, classification, and underwater communications equipment for surface ships, submarines, and aircraft. Included are: SQS–23 sonars and variable depth sonars, data converters and radio control equipment for the DASH weapons system, and a new accurate range-rate recorder for shipboard sonars. For submarines there are communications buoys, acoustic data-gathering equipment, submarine sonar IFF equipment, and a secure submarine communications system. For aircraft—there are new improved sonobuoys, Julie Jezebel readout equipment and new high-powered dipping sonars for helicopters.

Many of these electronics equipments will be back-fitted to our present ships and aircraft to increase the capability of our existing ASW forces.

Funds for improvement of fixed, long-range, underwater sonar detection and classification systems also are included in the budget.

In summary, the Navy's concern over the ASW problem is grave. Within its resources, the Navy is devoting maximum funds and effort to develop new means and improve current techniques for solving this problem. There has been marked improvement in our ASW capability, and even more significant progress will be attained in 1960 and 1961 as new equipment is installed. However, the submarine advances have been even more rapid, and we are not yet able to feel confident in our ability to meet the threat—especially that posed by the anticipated sub-launched ballistic missiles. We must continue intense efforts to increase our ability to meet the various degrees and types of submarine warfare with our ASW forces.

OTHER PROCUREMENT

The appropriation structure for major procurement of hardware for the Navy includes two major changes in fiscal year 1961. First, as I have already discussed, the new appropriation "Procurement of aircraft and missiles, Navy" incorporates the major elements of the old "Aircraft and related procurement, Navy" appropriations. This combination of missiles along with aircraft procurement is in line with the functions of the newly established Bureau of Naval Weapons. Second, a new appropriation "Other procurement, Navy" will contain all other major procurement of the Navy with the exception of ship construction, which will continue to be financed under the appropriation "Shipbuilding and conversion, Navy." The consolidations will bring about a highly desired purification of the procurement as well as the operations and maintenance areas of funding in the Navy.

Procurement of electronic equipment, formerly major electronic procurement under "Shipbuilding and conversion, Navy," has been moved to "Other procurement," $140 million is budgeted in fiscal year 1961 for radars, sonars, and communications equipment. Of this amount $44 million is to be used for modernization of naval communications, ashore and afloat, through purchase of modern communications and cryptographic equipment. There is great need to improve our communications capability. Our sophistication in weapons systems requires communications of a capacity, quality, reliability, and security which are technically feasible but which we do not yet have. A few examples of programs budgeted under this appropriation are

microwave links ashore, automatic security equipment, and single sideband equipment, both ashore and afloat; and shipboard quick-shift UHF and teletypewriter installations at about one-third the rate required to overcome obsolescence. Budgeting for the procurement of communications equipment in this appropriation is expected to permit improved coordination of both the fleet and shore programs.

Other relatively small items have also been placed in the new appropriation. For example, from "Aircraft and related procurement, Navy," we moved into "Other procurement, Navy," $40 million in aviator's survival gear, aircraft, and test equipment and $37 million in ground electronics and detection equipment. Nearly $70 million of ordnance procurement—the other-than-guided missile part of the former "Procurement of ordnance and ammunition, Navy," is also in this new appropriation. This includes $40 million for ASW—mainly torpedoes—and $30 million for aviation ammunition.

RESEARCH AND DEVELOPMENT

The research, development, test, and evaluation program determines the ship design, weapons, propulsion, and other systems for the future. With advancing technology being applied to the most intricate problems of submarine, air, and amphibious warfare and with the added problem of mounting equipment in ships and aircraft with motion and weight consideration. Navy R.D.T. & E. problems are unique.

Navy research and development is divided into three parts. The first part, encompassing weapons and supporting systems, deals with military hardware to be employed by the fleet. In the reviews of the fiscal year 1961 research and development program the number of weapon and supporting systems was reduced from 90 to 63, through consolidation of effort and cancellation of system work.

The second part, supporting research, provides for the application of the results of basic research to the development of components and techniques for weapons improvement. Significant work in this field includes a noise reduction program for surface ships and submarines and project ARTEMIS, which is a research program to establish the feasibility of ocean area active sonar surveillance.

The third part, basic research, explores the principles of science for new knowledge which may have application in naval warfare. Emphasis is placed on the sciences of physics, metallurgy, electronics, mathematics and applied mechanics.

The list of fiscal year 1961 planned, approved program objectives is headed by improvement of the fleet antisubmarine capability. Improved striking force ability, of which POLARIS is a part, is also high in priority. The extension of nuclear power ultimately to all types of naval combatant ships is a long-range objective of importance. Evidence that we are making progress in this direction is the fact that, with those in the fiscal year 1961 budget, the Navy will have 43 nuclear-powered submarines and 3 nuclear-powered surface ships authorized. Other objectives are improved aircraft and ship missile systems; improved antiair warfare capability; and increased mobility, reaction speed, and striking power of the Marine Corps.

ASW problems are complicated by the advent of high speed, deep diving submarines with nuclear propulsion. We are developing

antisubmarine warfare surveillance and weapons systems, mobile and fixed. Improved sonar will be developed for surface ships, submarines, and fixed installations. New techniques of signal processing will be explored. New hull and sonar transducer designs are being developed. Aircraft ASW systems, improved sonobuoys, torpedoes, and nuclear depth bombs are under development.

In research and development on information exchange techniques, progress is being made with the Navy tactical data system, an electronic development involving solid state digital computers, communications and display devices. The unprecedented capacity, reliability, speed and security, which are communications requirements of a fleet of the nuclear age, are being sought in research and development to enlarge present channel capacity, to provide new modes of communicating, and to provide more satisfactory equipment than is available in the present state of the art.

The EAGLE MISSILEER project will provide a subsonic, long-range aircraft with a high-performance missile for antiair warfare.

Work on the Navy's guided missiles has been highly successful. RDT & E is continuing work in development and improvement of this weapons family.

The Navy is extremely interested in the possible military applications of "space" systems, and is actively engaged in this expanding field of revolutionary technology. SPASUR, a space surveillance system; and TRANSIT, a satellite doppler navigation system developed under Navy management, may be the first useful "space" systems placed in operation in this country.

During the formulation of the fiscal year 1960 budget estimates, the appropriation "Research and development, Navy" was expanded to include the funding of material produced for the test and evaluation phase of the development programs. The new appropriation was retitled "Research, Development, Test, and Evaluation, Navy." Because of administrative difficulties, the adjustment between appropriations was made only partially in that fiscal year. During formulation of the fiscal year 1961 budget estimates, the transition was completed and test and evaluation items costing about $222 million were transferred from procurement appropriations to this appropriation. A few test and evaluation items which will be in the final stage of development in 1961 are still funded from procurement appropriations because of the administrative difficulties which would be created if they were transferred.

In effect, the same agencies are performing the same functions, but relating the test evaluation phase with the balance of the development program and identifying the total cost of these functions permits better coordination of the research, development, test, and evaluation programs.

Some of the larger transfers were $112 million from the former Aircraft and related procurement, Navy, of which $66.5 million was for the EAGLE and CORVUS missile programs and $19.5 million was for a new aircraft engine associated with the EAGLE system. Another $104 million was moved from the former appropriation, "Procurement of ordnance and ammunition, Navy"; this amount provides test and evaluation funds of $100 million for the POLARIS system and $3 million for the SUBROC missile system.

MILITARY CONSTRUCTION

Although you will conduct hearings on the military construction appropriations separately at a later date, I would like to discuss the Navy's military construction program very briefly.

The military posture to provide a general war deterrent and a limited war potential requires modernization of our continental bases and a limited network of oversea bases. The continental Shore Establishment which outfits, repairs, trains, and provides modern weapons systems to the operating forces is our primary logistic support force. To support our deployed naval forces we need supply, communication, minor repair, harbor, and aviation facilities near the periphery of the geopolitical frontiers of the Soviet Union and the other nations of the Communist bloc. Although modest in number and size, these oversea bases, in the absence of the mobile logistic forces necessary to provide support from CONUS, are extremely important in providing staying power to the fleet as cheaply as possible. Our continental and oversea bases are vital links between our productive home base and the deployed, mobile, combat-ready operating forces. The continental Shore Establishment which outfits, repairs, trains, and provides modern weapons systems to the operating forces is our primary logistic support complex.

The operating forces of the Navy are being modernized in many areas of rapid technological advances including the addition of high performance jet aircraft, nuclear submarines and surface ships, missiles, and faster, more efficient communications. Concurrent with fleet modernization, it is essential to modernize the shore stations to make them capable of supporting the modern operating forces.

The Navy's fiscal year 1961 military construction program is small, and provides only the most urgently required facilities. These include facilities for support of the POLARIS weapon system, which becomes operational late in this calendar year. A significant part of the fiscal year 1961 program will improve the operational facilities providing direct fleet support. Examples are modernization of communications, ASW, aviation, and Marine Corps operational and training facilities. This year's program also provides facilities for research and development, for training naval and Marine Corps personnel and for the Pacific Missile Range, which is used by other services and Government agencies as well as by the Navy. In the area of family housing, the proposed fiscal year 1961 construction program would provide approximately 3,800 Capehart and Commodity Credit units. This is one-third of our firm requirement.

The increased cost of complex weapons carries over into higher cost of the technical facilities required to support them. In addition, the cost index for construction has increased in the past few years. Each year it becomes more difficult to provide a balanced program supporting all the Navy's requirements. For this reason it has been necessary to give priority to fleet operating requirements and accord lower priorities to many important indirect fleet support items, such as for research and development.

POLARIS PROGRAM

The Navy has under active development the POLARIS fleet ballistic missile system. The POLARIS system consists of a nuclear-powered submarine carrying 16 missiles in vertical launching tubes. The submarine is about 380 feet long. It displaces about 7,000 tons submerged. It is manned by a crew of 10 officers and 90 men. It is capable of remaining submerged for extended periods. Missiles can be launched at a rapid rate while the submarine is either submerged or on the surface. Advanced fire control and navigation systems provide excellent accuracy. The missile, initially capable of a 1,200-mile range, will soon be followed by a 1,500 nautical mile version. It has a solid propellant for fast reaction, safety, and reliability of handling. As missile costs go, it is relatively inexpensive to manufacture and operate. Because of its inherently high degree of invulnerability, and its carefully engineered combination of several recent major advances in technology, the POLARIS system is destined for a long, useful, military life.

The Navy is doing everything possible to bring about the achievement of an operational capability with the POLARIS weapon system successfully at the earliest possible date. The Navy is confident that the weapon system development is sufficiently advanced so that it will be able to deploy operationally the first two POLARIS submarines in late 1960. Remaining submarines will become operational at intervals of about 4 months.

The three POLARIS submarines in the fiscal year 1961 budget will raise the total authorized to 12. Missiles for these ships have been undergoing tests, and these tests indicate a high degree of success. When the first POLARIS submarine gets to sea with the first tactical missiles on board and we have a proven, highly successful missile weapon system in hand, the Navy anticipates that this program will be considerably expanded in scope.

PACIFIC MISSILE RANGE

Since its establishment by the Department of Defense late in 1957, the Pacific Missile Range has had the mission of providing range support for Department of Defense and other Government agencies in guided missile, satellite, and space-vehicle research, development, evaluation, and training programs. Located in the vicinity of Point Arguello, Calif., it provides outstanding features for the firing of missiles and space vehicles.

A complex of five ranges is being established. Although the entire range system will take approximately 15 years to complete, some ranges are now in use. The sea test range was in use for some years before establishment of the Pacific Missile Range complex and is now being expanded for test of SPARROW III, CORVUS, EAGLE, GAR–9, NIKE-ZEUS, and for fleet training. The IRBM range was established in December 1958 with the firing of a THOR missile. The polar orbit range was established in January 1959. The ICBM range to Wake Island was established with the firing of an ATLAS in September 1959.

The fiscal year 1961 budget provides for general range operating costs such as labor and materials, recurring contractual services and range operation, and development contracts. It also provides im-

proved instrumentation, including additional telemetry and tracking facilities and associated installations down range, support for the Army NIKE-ZEUS program at Kwajalein, and the operating costs for three instrumented range ships.

The range provides essential services in a greatly expanding field, which is increasing in importance with the rapid developments in missiles and space satellites. In a short time, space vehicles are expected to provide new means of communications, navigation, early warning, intelligence, and collection of scientific data for the armed services and Government agencies.

NAVY SPACE EFFORTS

The support provided by the Pacific Missile Range is part of the Navy's contribution to the national space effort. Navy use of space began long ago, and it will continue for a long time to come. The Navy has been charting the position of the sun, moon, planets, and stars for over a hundred years for the Nation's navigators. As space systems attain a feasible status, to be operated by the military services, the Navy expects to assume support of the navigational satellite TRANSIT.

Navy satellities and Navy instrumentation are in orbit today. The Navy has bounced radio energy off the moon's surface and back to earth for routine communications, and has a system in being for this purpose.

The Navy operates the Nation's only operational space surveillance net—a system which detects and records the orbital passages of every manmade satellite. This system (SpaSur) has supplied all the data needed for the prediction of orbital passages, life and death of these satellities. Developed by the Navy under ARPA sponsorship, it is currently providing the fleets with information concerning existing satellites and any newly placed in orbit.

Navy medical personnel began more than a decade ago to reach into the environment of space where man must be properly equipped to function as a useful astronaut. Their knowledge and skills have contributed much to the recent successful animal space flights.

Our main interest in satellites and satelloids is not so much in their launching and recovery, but instead it is focussed on what they carry. Much valuable, possibly vital, information unimpeded by radio interference and weather conditions, can be obtained from navigation, meteorological, communication, reconnaissance, early warning, and other space vehicles. Direct Navy participation in the development and employment of satellites and satelloids is important to insure that the information is readily and quickly given to the fleets in usable form. Properly engineered, these space vehicles should be responsive to interrogation by ships at sea and by aircraft in flight, and should transmit the information to them directly.

Space technology can help the Navy to accomplish its missions and our space efforts are directed toward that end. We will continue to be a steady performing member of our national space team providing national range support, tracking, communications, payload recovery, and safe operating conditions for our national space projects, both military and civilian.

I have covered a few of the salient points which were taken into account in the formulation of the budget and the highlights of various fiscal year 1961 programs.

The Navy of fiscal year 1961 will be smaller and more thinly spread and older, despite an influx of new and converted ships. It will have the same or increased responsibilities.

Our deployed forces will continue to be alert forces. The 6th Fleet in the Mediterranean and the 7th Fleet in the Far East are immediately ready for general or limited war. They keep our lines of communications open to our own forces and to our allies. They can move quickly into trouble spots. They exercise a stabilizing influence in the turbulent areas of the Middle East, the Indian Ocean area, and the Orient. The 2d Fleet deployed in the Atlantic and the 1st Fleet deployed in the Pacific have separate and specific missions in the Northeastern Atlantic and Western Pacific areas, respectively, in the event of general war. Otherwise, they are available to cover crises, either as separate forces or as reinforcements for the 6th and 7th Fleets.

The *George Washington*, the first U.S. fleet ballistic missile submarine, will soon be operational and will shortly be joined by others. The advent of FBM submarines will have a real and significant impact on the U.S. general war posture.

Other submarine forces with their growing number of nuclear-powered submarines will enhance the ASW effort while maintaining their capability to attack enemy surface forces.

Our surface, air, and subsurface antisubmarine forces will be improving their effectiveness with better detection equipment and more effective weapons. They will need additional forces and even more advanced equipment in order to meet the future threat posed by nuclear- and missile-firing submarines. Special task forces for ASW training and experimental work will continue to operate in both fleets. Nuclear submarine operations in the Arctic will be continued. The Naval Shore Establishment will provide fleet support on a slightly reduced scale.

We will carry on our work in the Antarctic. We will continue the barrier flights on the seaward extensions of the DEW line. We will carry on with the people-to-people program in our visits to various foreign ports. We will carry out other unique responsibilities which are the Navy's privilege to perform.

Mr. Chairman, this concludes my statement. There is a compendium supporting this statement, which I would like to submit for the use of the committee.

Mr. MAHON. Very well.

GENERAL STATEMENT OF COMMANDANT OF THE MARINE CORPS

Mr. MAHON. General Shoup, this is our first opportunity to hear from you as Commandant of the Marine Corps. We have heard many fine things about you and are pleased to have your statement at this time.

(The biographical sketch of General Shoup follows:)

General David M. Shoup, USMC

Gen. David Monroe Shoup is now serving as the 22d Commandant of the Marine Corps. A Marine officer since 1926, he assumed his present duties and was promoted to his present rank on January 1, 1960.

As a colonel in World War II, General Shoup earned the Nation's highest award, the Medal of Honor, while commanding the 2d Marines, 2d Marine Division, at Betio, a bitterly contested island of Tarawa Atoll. The British Distinguished Service Order was also awarded him for this action. The following citation accompanied his award of the Medal of Honor:

"For conspicuous gallantry and intrepidity at the risk of his own life above and beyond the call of duty as commanding officer of all Marine Corps troops in action against enemy Japanese forces on Betio Island, Tarawa Atoll, Gilbert Islands, from November 20 to 22, 1943.

"Although severly shocked by an exploding shell soon after landing at the pier, and suffering from a serious painful leg wound which had become infected, Colonel Shoup fearlessly exposed himself to the terrific relentless artillery, machine gun, and rifle fire from hostile shore emplacements and, rallying his hesitant troops by his own inspiring heroism, gallantly led them across the fringing reefs to charge the heavily fortified island and reinforced our hard-pressed, thinly held lines. Upon arrival at the shore, he assumed command of all landed troops and, working without rest under constant withering enemy fire during the next 2 days conducted smashing attacks against unbelievably strong and fanatically defended Japanese positions despite innumerable obstacles and heavy casualties.

"By his brilliant leadership, daring tactics, and selfless devotion to duty, Colonel Shoup was largely responsible for the final, decisive defeat of the enemy and his indomitable fighting spirit reflects great credit upon the U.S. naval service."

General Shoup was the 25th Marine to receive the Medal of Honor in World War II. It was presented to him on January 22, 1945, by the late James V. Forrestal, then Secretary of the Navy.

The general was born December 30, 1904, at Battle Ground, Ind. A 1926 graduate of DePauw University, Greencastle, Ind., he was a member of the Reserve Officers Training Corps at the university. He served for a month as a second lieutenant in the Army Infantry Reserve before he was commissioned a Marine second lieutenant on July 20, 1926.

Ordered to Marine Officers Basic School at the Philadelphia Navy Yard, Lieutenant Shoup's instruction was interrupted twice by temporary duty elsewhere in the United States, and by expeditionary duty with the Sixth Marines in Tientsin, China. After serving in China during most of 1927, he completed basic school in 1928. He then served at Quantico, Va.; Pensacola, Fla.; and San Diego, Calif.

From June 1929 to September 1931, Lieutenant Shoup was assigned to the Marine detachment aboard the U.S.S. *Maryland*. By coincidence, the U.S.S. *Maryland* was the flagship for the assault on Tarawa 12 years later—providing emergency naval gunfire support with her 16-inch guns early on D-day. On his return from sea duty, he served as a company officer at the Marine Corps Base (later Marine Corps Recruit Depot), San Diego, until May 1932 when he was ordered to the Puget Sound Navy Yard, Bremerton, Wash. He was promoted to first lieutenant in June 1932.

Lieutenant Shoup later served on temporary duty with the Civilian Conservation Corps in Idaho and New Jersey from June 1933 to May 1934. Following duty in Seattle, Wash., he was again ordered to China in November 1934, serving briefly with the 4th Marines in Shanghai, and, subsequently, at the American Legation in Peiping. He returned to the United States, via Japan, early in June 1936 and was again stationed at the Puget Sound Navy Yard. He was promoted to captain in October 1936.

Captain Shoup entered the junior course, Marine Corps Schools, Quantico, in July 1937. On completing the course in May 1938, he served as an instructor for 2 years. In June 1940, he joined the 6th Marines in San Diego. He was promoted to major in April 1941.

One month later, Major Shoup was ordered to Iceland with the 6th Marines and, after serving as regimental operations officer, became operations officer of the 1st Marine Brigade in Iceland in October 1941. For his service in Iceland during the first 3 months after the United States entered World War II, he was awarded the Letter of Commendation with Commendation Ribbon. He assumed command of the 2d Battalion, 6th Marines, in February 1942. On returning to

the States in March, the 1st Marine Brigade was disbanded and he returned with his battalion to San Diego. In July 1942, he became assistant operations and training officer of the 2d Marine Division. He was promoted to lieutenant colonel in August 1942.

Sailing from San Diego aboard the U.S.S. *Matsonia* in September 1942, Lieutenant Colonel Shoup arrived at Wellington, New Zealand, later that month. From then until November 1943, he served as G–3, operations and training officer of the 2d Marine Division during its training period in New Zealand. His service in this capacity during the planning of the assault on Tarawa earned him his first Legion of Merit with Combat "V." During this period he also served briefly as an observer with the 1st Marine Division on Guadalcanal in October 1942, and with the 43d Army Division on Rendova, New Georgia, in the summer of 1943, earning a Purple Heart in the latter operation.

Promoted to colonel November 9, 1943, Colonel Shoup was placed in command of the 2d Marines (reinforced), the spearhead of the assault on Tarawa. During this action he earned the Medal of Honor as well as a second Purple Heart. In December 1943, he became chief of staff of the 2d Marine Division. For outstanding service in this capacity from June to August 1944, during the battles for Saipan and Tinian, he was again awarded the Legion of Merit with Combat "V." He returned to the United States in October 1944.

On his return to the States, Colonel Shoup served as logistics officer, Division of Plans and Policies, Headquarters Marine Corps. He was again ordered overseas in June 1947. Two months later he became commanding officer, Service Command, Fleet Marine Force, Pacific. In June 1949, he joined the 1st Marine Division at Camp Pendleton as division chief of staff. A year later he was transferred to Quantico where he served as commanding officer of the basic school from July 1950 until April 1952. He was then assigned to the Office of the Fiscal Director, Headquarters Marine Corps, serving as Assistant Fiscal Director. He was promoted to brigadier general in April 1953.

In July 1953, General Shoup was named Fiscal Director of the Marine Corps. While serving in this capacity, he was promoted to major general in September 1955. Subsequently, in May 1956, he began a brief assignment as Inspector General for Recruit Training. Following this, he served as Inspector General of the Marine Corps from September 1956 until May 1957. He returned to Camp Pendelton in June 1957 to become commanding general of the 1st Marine Division.

General Shoup joined the 3d Marine Division on Okinawa in March 1958 as commanding general. Following his return to the States, he served as commanding general of the Marine Corps Recruit Depot, Parris Island, from May to October 1959. On November 2, 1959, he was promoted to lieutenant general and assumed duties as Chief of Staff, Headquarters Marine Corps. He served in this capacity until he assumed his current assignment.

General Shoup was nominated by President Dwight D. Eisenhower on August 14, 1959, to be 22d Commandant of the Marine Corps. Subsequently, his nomination for a 4-year term, beginning January 1, 1960, was confirmed by the Senate.

A complete list of the general's medals and decorations includes: the Medal of Honor, the Legion of Merit with Combat "V" and Gold Star in lieu of a second award, the Letter of Commendation with Commendation Ribbon, the Purple Heart with Gold Star in lieu of a second award, the Presidential Unit Citation, the Yangtze Service Medal, the Expeditionary Medal, the American Defense Service Medal with base clasp, the European-African-Middle Eastern Campaign Medal, the Asiatic-Pacific Campaign Medal with four bronze stars, the American Campaign Medal, the World War II Victory Medal, the National Defense Service Medal, and the British Distinguished Service Order.

General Shoup is married to the former Zola DeHaven of Covington, Ind. They have a daughter, Carolyn (now Mrs Joel S. Watkins); and a son, Robert. The general's parents are deceased.

General SHOUP. Mr. Chairman and gentlemen, I welcome this opportunity to appear before you. I proposed to introduce the Marine Corps budget submission for fiscal year 1961 with a general statement concerning the condition of our corps today. I will follow up with a discussion of the programs which this budget will permit the Marine Corps to pursue.

The budget estimate we present for fiscal year 1961 has two fundamental aspects: First, it stems directly from the statutory missions of the Marine Corps; and, second, it has been prepared with a clear view of the overall requirements, both military and economic, of the Nation.

In general, our budget estimate will permit the Marine Corps to maintain, equip, train, and support three reduced division-wing teams, a supporting establishment comprising essential facilities for administrative and logistical support, a Marine Corps Reserve to fill gaps in existing organizations during emergencies and mobilization, and ships detachments and security forces as required. Only the essentials are provided for. We are striving for the best balance of naval forces deemed possible within the assets available in the Department of the Navy budget. Continued emphasis will be placed on equipment modernization; however, with presently available equipment we will still be able to meet our "force in readiness" role for either general or limited war.

I should like to tell you briefly of the major aspects of the Marine Corps' broad programs for fiscal year 1961, highlighting each as it affects the budget submission.

FLEET MARINE FORCES

The Fleet Marine Forces—primarily the three combat divisions and three aircraft wings—comprise the bulk of our operating forces. Elements of these forces are strategically located so that they can be deployed on short notice to any trouble area in the world.

One division—is based on Okinawa and one aircraft wing—is based primarily in the Okinawa-Japan area. This air-ground team furnishes the aircraft group and ground regiment, plus their supporting units, which comprise the 1st Marine Brigade in Hawaii. The aviation and ground elements of the brigade share common facilities at Kaneohe, Hawaii. Another division-wing team is located in California at Camp Pendleton and El Toro. The remaining division-wing team is located on the east coast at Camp Lejeune and Cherry Point. One reinforced battalion and elements of one aircraft squadron from the east coast division-wing team are on continuous duty with Naval Forces in the Mediterranean.

I envisage that these units will continue in their present locations with no change in mission during the forthcoming fiscal year.

OTHER OPERATING FORCES

In addition to our Fleet Marine Forces, this budget will support the continued operation of our other operating forces at about the same level as in fiscal year 1960. These forces are the security barracks and detachments, primarily at naval activities at home and overseas; the Marine detachments aboard designated combatant ships of the fleets; and the detachments at various oversea activities of the State Department.

OVERALL MILITARY AND CIVILIAN PERSONNEL

In arriving at and maintaining the level strength of 175,000 marines, the balance and staying power of our operating forces have been

diminished. Four years ago, my predecessor began his tour with about 200,000 marines. Since then there has been a net reduction of 25,000 marines. Our civilian personnel has been reduced on a comparative basis by about 1,900 in the same time period. Thus, we have significantly fewer personnel in our Marine Corps military-civilian team, but we have the same missions to accomplish.

Last year we told this committee that experience in Lebanon and the Far East had conclusively demonstrated the risk of maintaining battalion landing teams seriously below effective combat strength. Consequently, six battalion landing teams and six squadrons were deactivated and the personnel from these units were distributed among the remaining combat units so that they could be maintained at effective personnel strengths. My goal is to insure that all active Fleet Marine Force units are maintained at effective combat strengths at all times to guarantee full combat readiness.

We predicted last year that increased personnel stability would reduce our training load, decrease overhead, and produce higher quality marines as well as a higher degree of readiness during fiscal year 1961. This prediction will materialize. Furthermore, unit rotation of our stabilized infantry battalions and aviation squadrons between continental bases and the Far East has not only improved combat readiness and morale, but also has resulted in personnel savings.

All of these savings permit me to correct some of the personnel shortages in the Fleet Marine Forces. I plan to reactivate two of the six previously deactivated battalion landing teams and to activate a surface-to-air missile battalion to utilize the new HAWK missile.

MARINE CORPS RESERVE

If the Reserves are to serve their traditional role during emergencies, their basic organization and objectives must be kept parallel with those of the Active Forces. Quality and combat readiness must take precedence over numbers. By the end of fiscal year 1961 all elements of the Marine Corps Reserve will complete reorganization in conformity with the new structure of the Regular Establishment. We also expect the transition to multiple drills, which has been accomplished this year, to bring a continued improvement in the mobilization readiness of our Reserve units.

MATERIEL AND MODERNIZATION

The broad materiel objective of the Marine Corps is to support our combat forces adequately. We must be capable of deploying our fighting units rapidly, and they must have the best equipment available. We introduce up-to-date fighting equipment into our combat units at the earliest possible time; however, we procure a new item only when it will do a significantly better job than the item it will replace. The Marine Corps wants combat materiel which will reduce weight and bulk, increase firepower and mobility, and improve our communication and electronics capability.

We have materiel on hand, or on order, which is generally sufficient to support our readiness role. However, we do not have enough stocks to support prolonged combat operations.

Approximately 8 percent of the funds in the procurement estimate will be used for mobilization improvement; almost 80 percent will be used for modernization. The funds for mobilization improvement will enable the Marine Corps to fill in some of the low points, but will not effect any appreciable improvement in the total overall stock position required to support mobilization.

As a summary, I have had prepared certain tabulations of pertinent statistics. That statistical summary is attached to the copies of my statement which have been made available to you.

The total Marine Corps' budget estimate of $902 million for fiscal year 1961 is slightly below that of fiscal year 1960. We are requesting only the essentials, and we will insure that a full return is received for every dollar. We will have to make our dollars go further. To accomplish this we must continue our emphasis on increased productivity, more efficient operations, and more effective use of available manpower.

From all points of view, I believe that the 1961 Marine Corps budget request is a sound national investment.

(Summary of the personnel requirements of the U.S. Marine Corps follows:)

Summary of the personnel requirements of the U.S. Marine Corps provided for by the fiscal year 1961 budget

1. MILITARY PERSONNEL

	Officer	Marcads	Enlisted	Aggregate	Percent of Marine Corps total
A. Active duty:					
Fleet Marine Force	7,618	----------	89,968	97,586	55.8
Security forces	470	----------	12,325	12,795	7.3
Marines afloat	252	----------	2,713	2,965	1.7
Subtotal, operating forces	8,340	----------	105,006	113,346	64.8
Training base	4,096	395	26,046	30,537	17.5
Supporting base	2,543	----------	16,264	18,807	10.7
Transients, patients, and prisoners	1,221	----------	11,089	12,310	7.0
Total	16,200	395	158,405	175,000	100.0
Begin strength fiscal year 1961	16,200	270	158,530	175,000	----------
End strength fiscal year 1961	16,200	395	158,405	175,000	----------
Average strength (man-years) fiscal year 1961	16,208	354	158,438	175,000	----------
B. Marine Corps Reserve organized pay status:					
Ground:					
48 drills	1,650	----------	32,821	34,471	----------
24 drills	168	----------	45	213	----------
6-month trainees	----------	----------	2,745	2,745	----------
Aviation:					
48 drills	1,700	----------	5,200	6,900	----------
24 drills	200	----------	----------	200	----------
6-month trainees	----------	----------	471	471	----------
Total	3,718	----------	41,282	45,000	----------
Begin strength, fiscal year 1961	3,718	----------	41,282	45,000	----------
End strength, fiscal year 1961	3,718	----------	41,282	45,000	----------
Average strength, fiscal year 1961	3,718	----------	39,972	43,690	----------
Nondrill pay Reserve	9,752	----------	118,094	127,846	----------
Total	13,470	----------	159,376	172,846	----------
Begin strength, fiscal year 1961	13,671	----------	194,329	208,000	----------
End strength, fiscal year 1961	13,470	----------	159,376	172,846	----------
Average strength, fiscal year 1961	13,570	----------	182,678	196,248	----------

Summary of the personnel requirements of the U.S. Marine Corps provided for by the fiscal year 1961 budget—Continued

2. CIVILIAN PERSONNEL

	IV-B	Others	Aggregate
Field: [1]			
Begin strength, fiscal year 1961	4,456	9,081	13,537
End strength, fiscal year 1961	4,420	9,068	13,488
Average strength, fiscal year 1961	4,640	8,940	13,580
Departmental:			
Begin strength, fiscal year 1961	1,191	9	1,200
End strength, fiscal year 1961	1,186	9	1,195
Average strength, fiscal year 1961	1,180	9	1,189
Totals:			
Begin strength, fiscal year 1961	5,647	9,090	14,737
End strength, fiscal year 1961	5,606	9,077	14,683
Average employment (man-years)	5,820	8,949	14,769

[1] Includes 180 personnel funded for by the Marine Corps but employed at activities not under Marine Corps management and excludes 1,366 average employment at Marine Corps managed activities, but funded for by other Government agencies.

Mr. MAHON. I believe that completes your formal statements. Secretary Franke, what would you like to do at this point?

Secretary FRANKE. Mr. Chairman, we have two presentations which we thought would be of interest to the committee and which perhaps would clear up some of the questions that might be answered and probably also will provoke others. One is on antisubmarine warfare, about which the committee is so interested, and the other is on aircraft carriers and their use and deployment.

Mr. MAHON. Let us begin with the antisubmarine warfare presentation.

ANTISUBMARINE WARFARE

Admiral YEAGER. Mr. Chairman, and members of the committee, I am Rear Adm. Howard A. Yeager, Antisubmarine Warfare Readiness Executive to the Chief of Naval Operations.

The substance of my presentation is covered in much more detail in the written efforts which has been submitted to you.

I feel that it is necessary to put the Navy's specialized antisubmarine warfare reports in proper context. Our Navy is composed of a balance of surface, air, and undersea units which can be tailored to a task at hand while contributing heavily to all aspects of our national military posture. Individual units are mutually supporting and integral parts of the defense team.

Every component of our Navy is an essential part of our ability to cope with the threat of enemy submarines.

Our striking fleets, including our POLARIS submarines, as they become available, will be major factors in preventing a general war—and thus in preventing the hostile use of over 400 Soviet submarines.

We are also concerned with antisubmarine operations in limited war. In limited war, antisubmarine warfare tasks will include protection of naval task forces (including amphibious landing forces), protection of support shipping, and protection of staging and unloading ports in the general area of conflict.

For the present, we are keeping antisubmarine warfare forces in likely areas of antisubmarine action, and maintaining them at the maximum degree of readiness. From many sources, we learn all we can of Soviet operations and capabilities.

In antisubmarine warfare operations we emphasize the coordination of all of the detection, localization, identification, and destructive elements of the naval weapon systems in our vehicles and supporting systems. Concentrated team effort is necessary to direct maximum destructive capability against the enemy submarines.

In the Atlantic, an antisubmarine defense group is at sea every day of the year. This group is ready for an emergency at any time and when not investigating contacts, is exercising and developing new antisubmarine warfare techniques and doctrine.

In the Pacific, we have a similar group always deployed as a part of the 7th Fleet in the Far East, and a second group available in the Eastern Pacific.

Other forces are available for antisubmarine warfare missions if their employment should be required.

EXERCISES

Highly realistic exercises to counter the submarine-guided missile threat are conducted periodically. These test our war plans, and promote teamwork between the various types of forces employed.

Through these and many lesser exercises we insure that our limited antisubmarine warfare forces and systems are well trained and ready for combat.

Our exercises have revealed that with highly trained personnel current antisubmarine warfare techniques are effective against conventional diesel-electric submarines. Destroying the high-speed nuclear sub and the submarine-launched missile are more difficult problems. We have accelerated our efforts to develop more effective methods to deal with these problems.

Our forces are not as strong numerically as we would like. Their training must be maintained at the highest level, and their effectiveness must be further improved to match expected Soviet submarine improvements.

CAPABILITIES OF COMPONENTS

The capabilities of the components which make up our current antisubmarine warfare forces will now be briefly covered.

First, the destroyer types. These ships, the majority of which were built during World War II, search and classify with hull-mounted sonar. Attack is effected by the use of ahead-thrown weapons, homing torpedoes, and depth charges.

ASW aircraft in the fleet are of four general types—the large land- and sea-based patrol aircraft; the fixed-wing, carrier-based aircraft; the blimps; and the antisubmarine warfare helicopters. The patrol aircraft search for submarines with radar, and other electronic devices. They search for submerged submarines with sonobuoys. They classify with magnetic equipment and they attack with homing torpedoes and depth bombs. Fixed-wing, carrier-based aircraft search for and classify submerged targets with sonobuoys and magnetic equipment. They attack with homing torpedoes and depth bombs.

Blimps use towed sonar and homing torpedoes. Helicopters use a dipping sonar for searching and tracking. Helicopters can make attacks with homing torpedoes. Patrol aircraft, carrier-based fixed-

wing aircraft and helicopters have the capability to employ nuclear depth bombs.

Submarines use a passive hydrophone array for search and tracking. Classification at intermediate ranges can be effected, and homing torpedoes are used for attack.

To contain the Soviet submarine force, whose capabilities are improving rapidly, we need: Intelligence on Soviet submarines, increased detection ranges, improved localization ability, more rapid classification techniques, higher speed ASW vehicles, early attack weapons systems, and additional ASW forces.

BUDGET FOR SPECIALIZED ASW PROGRAM

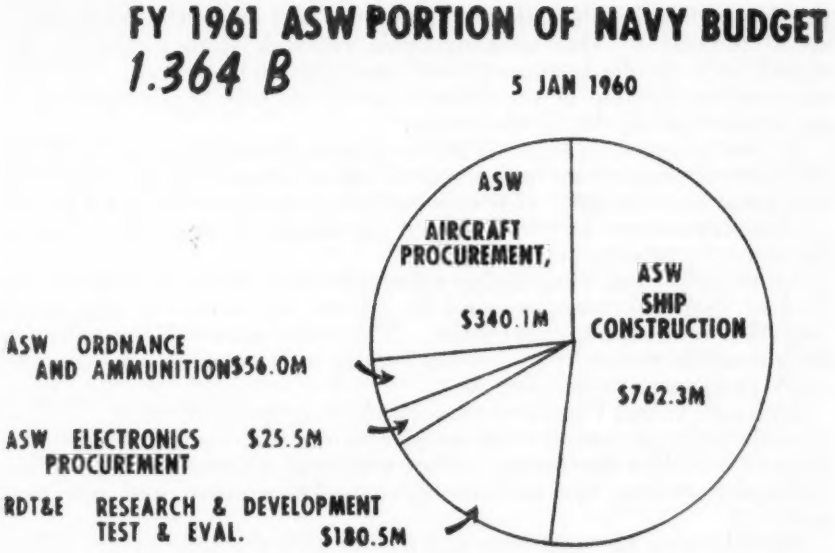
The funds requested for specialized ASW programs in the Navy's budget will permit us to make progress toward the fulfillment of these needs. I will now show you some charts which point up the specific ASW items in the Navy budget, and I will talk about the ones we think are the most important.

To start off the procurement portion of the Navy fiscal year 1961 budget is $4.673 billion and the research, development, test, and evaluation portion is $1.169 billion. A substantial proportion of the remainder of the budget which covers military personnel costs, funds for construction of shore support facilities, and operations and maintenance charges, supports the Navy's antisubmarine warfare effort. It is from the procurement and research, development, test, and evaluation portions that we obtain the specialized antisubmarine warfare vehicles, equipments, and weapons which constitute our material antisubmarine warfare strength. About $1.7 billion of the procurement and research, development, test, and evaluation funds have been allocated to programs directly related to the antisubmarine warfare effort. Under the new complete funding concept reflected in the fiscal year 1961 budget, $343.1 million of the procurement funds covers the cost of antisubmarine warfare ships authorized in previous year programs. We do believe that the forces and systems designed to detect and combat submarines at sea are receiving an equitable share of the total funds made available to the Navy.

Now let us see just how it is proposed that the Navy will employ the remaining $1.364 billion requested for antisubmarine warfare items.

This chart shows the division among the five basic subdivisions.

For ship construction and conversion.
For aircraft and related procurement.
For ordnance and ammunition components.
For major electronics procurement, and;
For research, development, test, and evaluation.



First, let us look at the ships, whose primary functions will be associated with the antisubmarine warfare effort, being requested in shipbuilding and conversion portion of the budget.

Fiscal year 1961 ASW shipbuilding program, $762.3 million, Dec. 30, 1959

	Millions
3 DLG	$231.6
2 DDG	92.5
2 DE	50.5
3 SSN	171.6
1 AGOR	4.9
1 AG (escort research)	29.3
1 AG (SS) deep diving	25.8
14 DD FRAM, MK I	142.1
1 AG (SS) *Albacore* conversion	14.0

With the appropriation of funds requested in the fiscal year 1961 budget, the Navy proposes to procure 13 additional ships, modification of the submarine *Albacore*, and the modernization of 14 World War II destroyers, to extend their useful life.

Three guided-missile frigates and two guided-missile destroyers will be equipped with the most modern long-range sonar equipment. They will carry the latest homing torpedoes, and also will be equipped with the antisubmarine rocket weapon system, which can project a torpedo or a nuclear depth charge payload through the air to a target at extended ranges.

Two improved destroyer escorts will be equipped with a new sonar equipment, which is expected to provide much improved detection ranges on submarines. These ships also will be equipped with the antisubmarine rocket weapon system, and, in addition, with the drone helicopter for weapon delivery. The budget provides for three nuclear-powered attack submarines similar to the four which were provided by funds appropriated by Congress in 1960. These subs will be fitted with an improved sonar system, which will provide for

passive and active detections. They also will carry the latest high-speed torpedoes. One oceanographic research ship, especially designed as a mobile laboratory for oceanographic research, will have the latest equipment and facilities to study the effects of environment on sound transmission in the ocean.

An escort research ship. This is of great importance to the Navy since it will provide an experimental ship of advanced hydrodynamic and propulsion design. It is expected that this ship will do for future surface ships what the whale-shaped experimental submarine *Albacore* has done for modern submarines.

An experimental deep-diving submarine is included to explore the field of deep submergence, and its effects on extremely long-range detection and attack capabilities. This submarine will be used for hydrographic research; to develop combat tactics; and to investigate ASW problems at great depths.

Fourteen World War II destroyers will undergo conversion. This is a continuation of a modernization program to prolong the useful life of some of our older destroyers. They will be given new sonars, a drone helicopter system, the antisubmarine rocket system, and new torpedoes.

Mr. MAHON. Let us resume at 2 o'clock with the ASW presentation.

AFTERNOON SESSION

Mr. MAHON. Admiral Yeager, you may proceed.

Admiral YEAGER. The submarine *Albacore*, which initiated the family of high-speed submarines of new hull design, is to have another modification in a continuing research and development program.

The total cost of the units I have just described, as indicated on the chart, will come to $762.3 million. This includes development costs.

Next we will look at the antisubmarine warfare aircraft procurement program.

Our antisubmarine warfare aircraft procurements for several years to come will consist of buys of the HSS–2 helicopter; the S–2F–3 fixed wing carrier-based aircraft; the new turboprop P–3V patrol planes; and the gas-turbine-driven DSN–3 drone helicopter for destroyers.

The costs of the new aircraft are as shown on the chart.

The modernization funds requested will provide for the completion of modernization of current patrol and carrier-based fixed-wing aircraft to extend their useful life.

With regard to sonobuoys, recent tests confirm that an improved model will pass evaluation soon. Production should commence early this summer.

Necessary training devices are provided under the command and control category.

Another important part of the budget relating to the antisubmarine warfare program is the procurement of major electronics equipment.

Fiscal year 1961 antisubmarine warfare electronics procurement

	Million
Sonar and detection equipment	$22.015
Communications	2.605
Trainers	.862
Total	25.482

Major electronics purchases of antisubmarine warfare items are divided into three categories. Variable depth sonars are being purchased for installation in the older destroyer types. These equipments will permit the ships to lower a sonar transducer below the thermal layers. Thermal layers are temperature gradients which reduce the effectiveness of hull-mounted equipment tremendously. A new high-powered surface ship sonar is being purchased for back fitting into our new destroyers, to give these ships the best antisubmarine warfare capability now possible. Communications and training equipment are also being provided.

Now the procurement of antisubmarine warfare ordnance and ammunition.

Most important in this section is the emphasis on early attack capability. ——— the surface ship, rocket-assisted weapons delivery system, which will employ either a homing torpedo or a nuclear depth bomb as a warhead, is expected to reach the fleet this summer.

In antisubmarine warfare torpedoes, we are limiting procurement to four types. Two of these are homing torpedoes, effective against advanced submarine types, one for use by surface ships and submarines; the other for use by surface ships and aircraft. The third torpedo is a submarine-launched ——— torpedo of advanced design, ———. The fourth torpedo, designed to match expected advances in submarine design and performance, is being procured for test and evaluation. ——— Operational evaluation will commence in early 1962.

Thus, by 1963, we will have standardized our torpedoes for aircraft, surface ships, and submarines. These torpedoes should be capable of destroying the best enemy submarines producible over the next 10 years. ———.

Torpedo support provides for material required to support training.

We need a greatly improved submarine-laid antisubmarine mine. We believe we have such a mine in the newly developed MK–57 mine. In this budget we are providing for the initial quantities needed for evaluation.

In addition, we continue to provide for mine testing, and many smaller antisubmarine warfare ordnance items such as antisubmarine warfare rockets, hedgehogs, practice depth charges, underwater sound signals, and support for test firing and other testing of torpedoes and mines. ———.

The fleet rehabilitation and modernization (FRAM) support consists of buying new torpedo tubes and torpedo-control equipment for FRAM destroyers.

Antisubmarine warfare research, development, test, and evaluation, fiscal year 1961

[Million dollars]

Total	$180.5
Classification, detection, and localization	63.4
Weapons, ordnance, and fire control	64.2
Vehicles and propulsion equipment	29.6
Collateral, supporting and related equipment	23.3

The R.D.T. & E. section is one in which the committee has special interest, and rightly so. If we are going to solve the problem of finding submarines by any other means than sheer numbers of forces,

it will be as the result of extensive improvements to our detection, classification, and localization equipment brought about by our research and development program.

Acoustic energy, sound, is the only form of energy that penetrates water to significant ranges. Therefore, a major portion of our research effort is going into attempts to increase acoustic detection ranges. Of the more than 100 antisubmarine warfare research projects, about one-half are concerned with acoustics and oceanography.

In oceanography, coordinated research is being conducted by both naval and civilian laboratories. These programs support 16 oceanographic research ships. In 1961, we plan to allocate $17.7 million to oceanography, compared to $13.5 million in 1960.

Development of sonar systems for ships, submarines, and aircraft is beginning to show rather impressive results, some of which are direct results of research in oceanography.

As you can see from the slide, another large R. & D. area covers weapons, ordnance, and fire control.

A new submarine weapons system and an intense program in long-range torpedo component development are being supported.

In the vehicle and propulsion area, the following are some of the projects underway: Improvements to, and reduction in size of, nuclear reactors and small gas-turbine engine development.

The last category, "Collateral and supporting and related equipment," is the area in which analysis, studies, and tests in support of the previous three categories are carried out.

DEPARTMENTAL ORGANIZATION TO COPE WITH THE ANTISUBMARINE WARFARE PROBLEM

Recent congressional, industrial, and press questions indicate that there is considerable interest in the organization of the Navy Department to cope with the antisubmarine warfare problem.

The current organization of the Navy Department strongly emphasizes antisubmarine warfare. Changes have been made recently to improve coordination of work on antisubmarine warfare problems. The scope of the composition of the Navy antisubmarine warfare committee, established in November 1959 under the chairmanship of the Secretary of the Navy, is planned to provide top-level policy direction to the Navy's antisubmarine effort.

With regard to industry, procedures for the reception and consideration of new ideas have been streamlined, and we are increasing the release of classified information as necessary to those companies capable of helping us solve our problems.

In the fleet, a concept of coordinating the antisubmarine warfare effort under an operational commander has been thoroughly tested in the Atlantic over a period of almost 2 years. The Pacific soon will have a similar command.

UTILIZATION OF ADDITIONAL APPROPRIATED FUNDS FOR 1960

Now a word about the additional money granted last year. The $137.3 million, including the $45 million provided for research and development, has been apportioned. A portion of the latter sum will

be obligated shortly to augment going programs and an additional amount will be obligated by the end of this fiscal year on new programs. This will be discussed in more detail by the Assistant Secretary of the Navy for Research and Development and his supporting witnesses, when they appear to testify on the Navy's research and development program. The additional money granted has permitted us to procure one nuclear-powered submarine plus a number of nuclear depth charges, antisubmarine helicopters, sonobuoys, and drone helicopters with supporting equipments.

Mr. Chairman, we've made a lot of progress—we have a long way to go. Since World War II we have increased significantly the sonar detection ranges of surface ships, and submarines. Sonobuoys permit our aircraft to make detections at considerable ranges. We have improved devices for classification. We can project weapons from surface ships to significant ranges, and we have homing torpedoes and nuclear depth bombs.

To overcome the current and rapidly improving capabilities of submarines, including nuclear-powered units, and submarines equipped for guided missile operations, we must have both increased numbers of antisubmarine warfare equipments and marked further improvements in detection, localization, classification, and destruction capabilities. We must have improvements in the ocean surveillance systems which permit us to employ the forces available most effectively.

This completes my prepared statement.

I stand by to attempt to answer your questions.

Mr. MAHON. We are very much pleased you have made this special presentation on antisubmarine warfare. As you know, we have been very interested in this very serious problem and your presentation will be quite helpful to us.

Admiral YEAGER. Thank you, sir.

STATEMENT ON ATTACK AIRCRAFT CARRIER

Mr. MAHON. Who is to make the next presentation?

Secretary FRANKE. Captain Mehle is going to make the presentation.

Mr. MAHON. Please proceed, Captain.

Captain MEHLE. Mr. Chairman, gentlemen of the committee, we face an era in which our ability to use the seas and project U.S. power overseas, will be more important to our country than ever before. In this era, modern naval forces of various types will become increasingly vital to national and free world security.

Within the framework of the balanced naval forces required by the Nation to maintain our position of sea supremacy, you have been apprised by the President, the Secretary of Defense, and the highest officials of the Navy Department that there is an urgent need for a new attack carrier.

There are four vitally important points in connection with this ship which should be made—and briefly examined. They are:

First. A basic strength in attack aircraft carriers, as the backbone of our naval power, is essential to U.S. security today. They are the lifeblood of U.S. sea supremacy. The requirement for this basic strength in our Navy will continue well into the future.

Second. In this ballistic missile age, mobility on the politically free high seas is the key to survivability. As ballistic missiles are improved

in range and accuracy, the existing value of the Navy's mobile sea-based airpower becomes increasingly great.

Third. In support of U.S. policy, in peace as well as war, it is essential that we maintain attack carriers continuously deployed in our numbered fleets in the Mediterranean and Far East as well as in the less remote regions of the Atlantic and Pacific Oceans. With the carriers we have now, a total of 14 attack carriers is necessary to keep the strength of these fleets at the requisite level and to meet our worldwide responsibilities.

Fourth. The carrier in this year's program is to be used as a replacement for one of our aging attack carriers. It will have the most modern aviation features and facilities technology can provide for handling high performance naval aircraft.

SPECIFIC NEED FOR ATTACK CARRIERS

The specific need for attack carriers in the U.S. Navy stems from two general factors:

The first is our need to maintain a continuing position of sea supremacy throughout the major seas of the world. We must be ready in peacetime to meet the requirements of war through a broad spectrum of warfare possibilities.

We must be prepared to control the seas for free world use and to deny their use to our enemies in any type of combat from conventional to nuclear war. More importantly, it is through these oceans, as recent history records, we would have to project our military power into the far reaches of the world in time of future war. Our carrier forces enable us to do this.

One other vital offensive function of the attack carrier is its contribution to the war against submarines.

As you have heard today, antisubmarine warfare is one of attrition. One element in this attritional process against submarines is to destroy—and keep destroyed—their home bases, pens, building and repair yards—and especially their deployed submarine tenders. The enemy will place many of these in locations unknown to us as soon as war commences. These, then, are the tasks of the attack carrier forces in antisubmarine warfare—to search out and attack the submarine at its source, to mine its exits, and, most important, to find and destroy the support facilities and tenders necessary to its operations at sea. This must be done as early in a war as possible.

The weapons, forces, and tactics required to maintain our overall position of sea supremacy are undergoing continuous reevaluation by all naval commanders and their staff.s The unanimous opinion of the responsible leaders of the Navy is that modern attack aircraft carriers, manned by the most modern, high-performance aircraft available, will be an indispensable component of our Navy offensive forces for years to come.

NEED FOR DEPLOYMENT OF MOBILE FORCES

The second factor demanding adequate carrier strength is related to our basic national policy—the policy that assistance to the free nations of the world is essential to our own national security—a policy that demands a strong limited war capability.

In support of this national policy, the United States must maintain mobile forces deployed in critical areas overseas. It must have the capability to put elements of its armed strength ashore against opposition, and to transport the men, weapons, and supplies necessary to sustain them.

Attack carrier striking forces, by a combination of airpower defense in depth, integrated logistic support, and unrestricted mobility over the free surfaces of the ocean, provide the offensive means by which our armed strength can be put ashore against enemy opposition in most strategically important areas of the world. Carrier based aircraft provide reconnaissance, interdiction, air superiority, and close tactical support in any degree required. Of vital importance are two considerations. They have the capability of using either conventional or nuclear weapons—and they are sovereign territory of the United States. No international agreements—or commitments—are required for their operation.

BALLISTIC MISSILE ATTACK ON CARRIER

My second main point is related primarily to the relative invulnerability of the attack carrier to ballistic missiles.

It is, of course, a fact that any present-day military target can be destroyed if the enemy can put against it, with some precision, a nuclear weapon. This applies to aircraft carriers as well as to any other kind of military target. However, the paradox of the ballistic missile age is that forces with inherent mobility—forces that are on the move in vast ocean expanses—are in a preferred position with respect to vulnerability. In fact, the aircraft carrier has become less vulnerable to ballistic missile damage than it was to attack by manned aircraft.

This radarscope photograph illustrates my point.

It is an actual picture of the radar return from the western portion of the Mediterranean on a typical day. It covers about 196,000 square miles. It is uncluttered by any defensive electronic countermeasures such as decoys or chaff bombs which would increase the apparent number of targets. Nevertheless, under these ideal conditions, it shows less than 25 percent of the total number of ships which were actually at sea in the area. In this picture are the ships of the 6th Fleet, including two attack carriers. But where are they? It is impossible to pick them out.

It is from vague and confusing information of this type that an enemy airborne or spaceborne radar would attempt to relay to its territory the precise position of our aircraft carriers so that ballistic missiles could be prepared for launch against them.

Based upon the unlikely presumption that an enemy aircraft could obtain ideal radar contact without disastrous opposition from our own fighters, even an expert radar interpreter would find it impossible to pick out the "blips" which are the aircraft carriers. But let's assume a chance guess has singled out one of the carriers. At least an hour would elapse before all necessary targeting information could be collated, introduced into the launch system, and arrival of enemy missile in the objective area. During this period, the carrier will have moved in an unpredictable direction as much as 30 miles from the predetermined (viz, at the time of firing) point of impact of the

missile. The missile will have been expended against a target that is not there.

AIRCRAFT ATTACK ON CARRIER

From the point of view of more conventional types of enemy action against our forces at sea, be they with bombs or airborne missiles, this photograph once again points up the tremendous problem involved. Successful use of bombs and airborne missiles is dependent upon detecting, and then visually distinguishing, the desired target. Of course, the attacker must then get close enough to use his weapons. This is quite hard to do. Our high performance manned interceptors embarked in the carrier itself, along with our already potent, and growing, surface-to-air missile capabilities in all of our combatant ships, provide a level of defense against conventional air attack which is very high in comparison to other air defense systems.

The defense of a carrier task force against submarines is complicated, particularly when nuclear submarines are introduced into the Soviet Navy. But, again, speed, mobility, atomic depth bombs, and longer range detection equipment have provided a vast improvement in the survivability of our naval ships at sea. To this must be added the power of our highly specialized "hunter/killer" antisubmarine forces on the prowl in suspected enemy submarine operating areas.

My third major point is that 14 operating attack carriers are needed now to enable the Navy to meet its worldwide responsibilities. They comprise the backbone of the Navy's striking fleets.

CONTRIBUTION OF CARRIER TO OUR MILITARY POSTURE

Attack carrier striking forces in these fleets contribute across the board to U.S. military posture necessary to meet cold war—limited war—general war situations in four major ways:

First. They are our only means of keeping U.S. airpower deployed in critical world areas during cold war without complete dependence upon base rights in foreign nations.

Second—and as a corollary to the first. They are our most dependable means of deterring limited wars because of their immediate availability and readiness for stabilizing crises in critical world areas. Furthermore, they are also capable of contributing heavily to the prompt containment of limited wars should such wars occur.

Third. They are an important aspect, in their own right, of the U.S. capability to deter all-out war because they can be ready to launch nuclear weapons on very short notice and are relatively immune to enemy ballistic missiles.

Last. Should all-out war occur they could and would contribute significantly to the U.S. nuclear retaliatory strike effort.

There must be enough attack aircraft carriers in the Navy's operating forces to provide the offensive backbone of each of our striking fleets. These fleets are deployed and operate as the principal segments of the naval components of the several worldwide JCS unified commands. We have four such fleets. In the Pacific the 1st Fleet is normally deployed in the Eastern Pacific. The 7th Fleet is continuously in the Far East. Both of these fleets are under CINCPAC.

In the Atlantic, the 2d Fleet is our major naval offensive force and it operates under CINCLANT. The U.S. 6th Fleet, always in the Mediterranean, operates under CINCEUR.

The purpose of the attack carriers in the striking fleets is to provide these commanders with a sea-based capability for stabilizing cold war crises, for containing limited wars, and, in the final analysis, for contributing to the prosecution of all-out war.

DISTRIBUTION AND EMPLOYMENT OF ATTACK CARRIERS

The Navy now has 14 attack carriers in commission.

Of these, eight attack carriers are assigned to the U.S. Pacific Fleet for deployment, under CINCPAC, in the 1st and 7th Fleets.

Specifically, three are deployed in the Western Pacific with the 7th Fleet to the maximum extent practicable. However, it is not always possible in peacetime to keep three attack carriers continuously deployed in the Far East and at the same time meet requirements for training, upkeep, overhaul, and crew rest. At times, therefore, it is necessary to reduce the carriers in the 7th Fleet to two.

It must be emphasized that the 7th Fleet is of critical importance to the stability of the Far East. Distances are very great and U.S. land-based facilities are limited. Moreover, the area contains a large portion of critical world hot spots.

One of the eight Pacific attack carriers is ordinarily in overhaul at any given time. The remainder of the ships are deployed in the Eastern Pacific either as part of the 1st Fleet or in training. The 1st Fleet backs up and augments the 7th Fleet as required. In addition, the 1st Fleet provides the nation with a capability for short duration emergency operations in the Indian Ocean.

Six of the Navy's 14 attack carriers are assigned to the U.S. Atlantic Fleet. These provide for continuous deployment of carriers in the 2d and 6th Fleets under CINCLANT and CINCEUR, respectively. Two are kept continuously in the 6th Fleet in the Mediterranean and are relieved on station periodically.

The 6th Fleet is an essential part of free world strength supporting NATO ties of Italy, Greece, and Turkey. This fleet is also a powerful stabilizing influence in the critical Middle East as we all know.

One of the remaining Atlantic Fleet carriers is, as in the Pacific, ordinarily in overhaul at any given time. The remaining three ships are deployed in the Western Atlantic either as part of the 2d Fleet or in training. The 2d Fleet augments and supports the 6th Fleet and has extremely important combat missions in the vital North Atlantic.

In both Pacific and the Atlantic, rotation of assigned carriers through training cycles, deployments with the numbered fleets, and upkeep and overhaul periods, results in maximum utilization to meet farflung responsibilities with very little margin to spare.

The typical 3-year employment schedule for attack carriers is of interest. The planned 36 months operating cycle provides for each carrier to be in overhaul for one 4-month period. It is deployed in the Pacific or Atlantic for employment in the 1st or 2d Fleets and training for a total of 20 months made up of several separate periods. Finally, it is deployed in the Far East or Mediterranean with the 7th or 6th Fleets for a total of 12 months—two 6-month periods.

However, planned employment schedules are discarded in emergencies to meet the threat.

At the peak of the 1958 Lebanon/Taiwan crisis, for example, the accelerated attack carrier readiness posture achieved with 14 carriers was as shown here:

Five were on combat stations in Asian waters, three were on station in the Eastern Atlantic/Mediterranean area, one was in the mid-Pacific and three more were at sea off the U.S. coasts ready to provide additional back up as necessary. Two were in overhaul.

COMPOSITION OF CARRIER FORCE BY AGE AND CLASS

The Navy's 14 operating CVA are today composed of *Essex*, *Midway*, and *Forrestal* class ships in the numbers shown here:

Thus, about 60 percent of the Navy's present active attack carriers, the *Essex* class, were built during World War II. They are aging fast and simply wearing out. It is an accepted standard among naval constructors that a ship's useful life span when confronted with a fast tempo of operations, is about 20 years. Furthermore, because of their old catapults and arresting gear, our World War II carriers have only a marginal capability to support the new fast and heavy jet aircraft which have come into service use. This problem will be aggravated severely as the years go by.

A recapitulation of the Navy's current carrier building and modernization program is also germane to today's proceedings. Three modern, replacement CVA's have been authorized, and are now building:

(*a*) (1) *Kitty Hawk*—authorized fiscal year 1956—join fleet, after shakedown, in early 1961.

(2) *Constellation*—authorized fiscal year 1957—join fleet, after shakedown, in late calendar year 1961.

(3) *Enterprise* (nuclear)—authorized fiscal year 1958—join fleet, after shakedown, in calendar year 1962.

(*b*) One *Midway* (*Coral Sea*)—a World War II designed ship—is now completing modernization and after a shakedown period will replace an *Essex*—in fact, the *Essex* itself—in several months.

Accordingly, the Navy's attack carrier inventory in 1962 will be as shown here:

ASSIGNMENT OF "ESSEX" CARRIERS TO ASW FORCE

As four of our present eight *Essex* class are replaced, therefore, between now and 1962, they will be redesignated as "antisubmarine carriers" and, in turn, will replace older ASW carriers, keeping that separate and specialized category of ships at the authorized level of nine. The antisubmarine carriers so replaced will be put out of commission, placed in reserve or disposed of if their condition warrants. Since the characteristics of ASW aircraft, insofar as performance is concerned, are not so demanding in terms of ship size and facilities as are attack aircraft, it is possible to operate them from *Essex* hulls.

In this manner we maintain both our attack carrier strength and ASW carrier strength at the requisite levels with a single carrier building program.

We will continue to replace our ASW carriers with the best *Essex* class ships we have available to us. Thus, we will continue to maintain our ASW carrier forces at adequate strength for the immediate future by use of existing hulls.

POSSIBLE REDUCTION OF CARRIER FORCE

The 1962 inventory shown here means that there will be four CVA's remaining in the fleet incapable of handling modern attack and fighter aircraft in all conditions of wind and sea. However, when the Navy has 11 new carrier decks in the fleet, it is possible that it can do the jobs it has to do with 11 attack carriers.

This, however, would not provide for training replacement pilots for the carrier air groups. Therefore, there would have to be two additional carriers, one each in the Atlantic and Pacific, with the mission of training.

Thus, with 11 modern attack carriers and 2 training carriers for a total of 13 attack-type carriers, the Navy may be able to do the jobs it must do in the 1970 era.

DESIRABLE CHARACTERISTICS OF ATTACK CARRIER

My fourth, and final, main point relates to the characteristics which the attack carrier requested in this budget will have. I will discuss this in two parts: First, size required and, second, propulsion system and related considerations.

We learned in Korea that the Chinese Communists were equipped with—and know how to use—the most modern combat aircraft Soviet technology had produced up to that time.

Furthermore, we are aware that the Soviet Union is engaged in an extensive program to equip all of her satellites, allies, and others with ever-increasing numbers of up-to-date machines of war. This includes combat aircraft—as well as other armament of all descriptions—for Soviet bloc sea-based and land-based forces.

Therefore, U.S. forces which may have to be employed in wars of lesser objectives than those of all-out war must, by all means, be capable of competing successfully against the most modern enemy equipment—with nuclear or conventional weapons—or both.

It is this philosophy which has governed the evolution of naval ships and aircraft, as well as associated tactical doctrine. We know that maintaining a position of sea supremacy for the United States dictates that our forces be designed to handle the most demanding tasks that could confront them across a broad spectrum of possibilities.

While developing and retaining a strong capability to compete directly against forces under the Russian flag with nuclear weapons, we have not forgotten that other kinds of conflict could develop which would be, in terms of combat effort required, just as exacting.

The Navy has striven for flexibility in its forces as well as a plateau of equipment modernity that can support whatever effort is required now and in the foreseeable future.

As to the specific question of attack carrier size which is needed to meet our basic philosophy, modern attack carriers must be significantly larger than those of World War II. This growth is reflected in the following comparison of gross weights:

Essex: A World War II designed and built class, displaces about 40,000 tons.

Midway: A World War II designed class, displaces about 60,000 tons.

Forrestal: A modern class carrier, displaces about 77,000 tons.

The question is: Why are they bigger? The corollary is: Do they really need to be?

These questions have been studied and restudied by the responsible officials of the Navy Department. Furthermore, extensive research has been done by the Bureau of Ships to make sure our new carriers are no bigger than they need to be.

Briefly, the answer to the "Why are they now bigger?" question is related to the size, complexity, and performance of present day and planned future aircraft. The answer to the question "Do they really need to be?" is "Yes."

The prescribed mission of an attack carrier is: "To support and operate aircraft to engage in attacks on targets afloat or ashore which threaten our control of the seas and to engage in sustained operations in support of other forces."

The three most important points in this short statement lie in the words "to support," "to operate," and "to engage."

DEVELOPMENT OF CARRIER AIRCRAFT

Advancing technologies in the past decade have resulted in bigger, heavier, more complex aircraft albeit with vastly improved performance over airplanes of World War II and Korean vintage.

Maximum speeds have risen dramatically, and there has been a significant rise in landing speeds.

The airframe growth of carrier-based aircraft is reflected by these data: In 1950 the heaviest aircraft at its maximum weight weighed 50,000 pounds—and there were only a very few in this category—in 1955 we started equipping the fleet with some airplanes which are now launched at weights up to 75,000 pounds—these will be with us for some time in relatively large numbers. Although in the 1960–65 period we will introduce new attack aircraft which will weigh about 60,000 pounds—and new fighters at about 48,000 pounds—the takeoff and landing speeds of these aircraft will remain relatively high. Thus, catapults must be able to produce high energies for launching and, conversely, arresting gear must be able to absorb high landing energies.

Present concepts of proper carrier design, therefore, are matched to existing and planned aircraft performance in the takeoff and landing configurations.

ADVANTAGES OF "FORRESTAL" CARRIERS

Carrier flight deck length has increased from about 866 feet in 1942 to about 1,025 feet today, an 18-percent increase. This has provided the space necessary for the longer runway lengths, as well as handling facilities, required for modern aircraft.

In this connection, it is interesting to reflect that land-based runways have gone from about 5,500 to over 11,000 feet during the same evolutionary period, a 100-percent increase.

The modern size ship has 71 percent more flight deck area than the smaller ship. This obviously enables it to carry more aircraft. Since required fighter strength to maintain air superiority remains constant for any size carrier, gains in combat capability through larger decks

are exclusively in the attack aircraft category. A *Forrestal* size ship can carry 50 percent more attack aircraft than can the smaller ship. This is a vital consideration in preparedness for combat operations.

The size of the *Forrestal* class with its increased flight deck area, and additional handling facilities—that is, elevators and catapults—also provides for faster and more efficient flight operations.

For example, in sustained flight operations an *Essex* size requires twice as much time as a *Forrestal* to launch a given number of aircraft of the same type. To turn these aircraft around—that is, to recover them, rearm, refuel, and respot them for next launch—the small ship also requires about twice as much time as a late *Forrestal.* It is in this area that additional elevators, properly located, and more catapults in modern ships have paid off.

TECHNICAL PROBLEMS IN DESIGN OF A CARRIER DECK

All of the factors discussed so far are important from the combat potential viewpoint and provide for overall effectivity in attack aircraft carriers. However, there are certain basic criteria which actually design the length of the landing and takeoff runways of modern attack carriers. This optimum flight deck size, in turn, will tend to fix overall ship length and establish hull requirements connected with good sea-keeping qualities.

Modern aircraft should approach the touchdown point on a carrier's flight deck at a glide path angle no greater than 2.5° and, in doing so, the aircraft's arresting hook should clear the after end of the flight deck by at least 11 feet. These are the criteria being used in the new carrier designs. Together, these two factors provide for an acceptable rate of descent at impact as well as a margin of safety for the aircraft over the ramp when the deck is pitching. By proper setting of the optical lens system installed in our carriers an optical glide path is established for the pilot, which will produce the desired glide angle, hook to ramp clearance, and allowable vertical rate of descent.

The 11-foot hook to ramp clearance, and a 2.5° glide angle fix the optimum hook touchdown point at about 250 feet from the after end of the flight deck. This portion of the deck is known as the approach area.

Modern carrier design provides for a four-wire array with the arresting wires spaced 40 feet apart. This gives the best arresting efficiency within a reasonable space—120 feet and is termed the "landing area." The third wire of this array is located just forward of the hook touchdown point. This arrangement compensates for errors, both plus and minus, in the aircraft's touchdown point induced by a pitching deck or by the pilot's inability to stay exactly on the glide slope.

After hook engagement has been effected, deck space is required, of course, to permit the wire to run out and decelerate the aircraft to a stop. This is termed the "arrestment area."

The distance required for this stopping process is about 350 feet in latest design. Arrestment in this distance represents the best compromise of energy absorption built into the ship, and the designed longitudinal deceleration strength of the aircraft—plus a small margin of safety.

It is readily apparent that the distance of 350 feet for arrestment must be provided forward of the last wire in the array in order to make all wires completely usable.

Ahead of the arrestment area, space must be provided to taxi the aircraft off the angled deck in the parking area. This is known as the turnoff area. Two factors fix its dimensions: the length of the longest carrier aircraft from tailhook to nose and a turning radius which will allow the aircraft to taxi out of the way of following aircraft. By adding 70 feet, the approximate length of our longest aircraft, and 40 feet, representing a typical turning radius, we see that 110 feet is needed for the turnoff area.

Then, adding up the landing runway component area dimensions 250 feet for the approach area, 40 feet for the forward third of the landing area, 350 feet for the arrestment area, and 110 feet for the turnoff area, a total of about 750 feet is derived as the length required for the angled deck.

This, however, is only part of the story: the launching space requirements must be determined and coupled with the landing area to establish the overall flight deck dimensions.

The required size of the aircraft launching area is primarily determined by the catapult installations. Catapults are mandatory for launching operations because of the slow acceleration characteristics inherent in jet aircraft. Catapults must also be provided in sufficient numbers to attain launching flexibility, a high launching rate, and to insure a backup capacity in the event of a catapult casualty. To meet these requirements modern carriers have four catapults—two forward in the bow and two in the waist.

Fore and aft dimensions of the ship's launching area, therefore, are once again a compromise involving catapult characteristics and the performance and design criteria of the aircraft. The catapult must have sufficient length to accelerate heavy aircraft to safe flying speed within practical limiting values of force applied to the airframe.

Latest catapults have a total installed length of 273 feet. Accordingly, a bow extension of about 270 feet forward of the angled deck is required.

Lateral spacing of catapults is determined by the wingtip to wingtip, and wheel to deck edge, clearances necessary to spot two aircraft simultaneously on the forward catapults.

When the 270-foot requirement for launching space is added to the 750 feet of landing space required, we have a flight deck of a little over 1,000 feet in length.

EFFECT OF INCREASED DECK SIZE ON FLIGHT OPERATIONS

The improved efficiency and performance in air operations which results from a carrier flight deck of this size and with modern facilities is concretely demonstrated by the safety records of the *Forrestal* class ships in comparison with the records of the smaller decks representative of the most modernized versions of the World War II *Essex* design.

This table compares the landing accident rates of these two classes of carriers for the inclusive period from July 1, 1956, to September 30, 1959:

We see that: (*a*) Operating similar aircraft, the *Forrestal* class carrier has approximately 60 percent of the landing accident rate of the *Essex* class.

(*b*) *Forrestal* accidents produced only one-fifth of the strikes—that is damage beyond repair—and one-half of the overhaul damage of the *Essex* accidents. The real significance here is that a crash aboard a smaller ship is usually much more severe than an accident under similar circumstances aboard a *Forrestal*. This is punctuated by the fact that

(*c*) The fatal accident rate in the *Essex* class is three and one-half times greater than that in the *Forrestal* class.

ADVANTAGES OF INCREASED HULL SIZE

Not a small part of this improvement in operational safety stems from the increased stability of the flight deck due to the larger hull of the *Forrestal* class. Because of their excellent sea-keeping qualities, flight operations aboard a *Forrestal* class are virtually unaffected by heavy weather. Smaller carriers are forced to suspend operations during heavy sea conditions in peace for safety considerations.

A study of sea states in the Norwegian Sea and the South China Sea, two of the world's stormiest ocean areas, showed that the *Forrestal* class could operate aircraft about 57 percent more of the time than a smaller size ship. This ability to operate aircraft in anything short of hurricane conditions gives a meaningful all-weather capability to the *Forrestal* carriers.

The larger hull size of modern carriers, dictated essentially by flight deck size requirements, has provided other bonuses in the support and logistic capacities of these ships. For example:

The *Forrestal* class carries three times the ammunition in its magazines in both the conventional and nuclear categories, as can the smaller ship.

The aviation fuel capacity of the *Forrestal*'s is double that of the *Essex*'s.

Therefore, the combat potential and staying power of the large ships is greatly superior to the smaller ones.

Finally, one very important factor, difficult to express by specific figures, which contributes materially to the overall operational and combat capability of the carrier and its air group, are the improved habitability, working space, and maintenance facilities available aboard the *Forrestal* class. These factors show up impressively during periods of sustained, high-density air operations. After several days of such operations, aircraft availability and crew efficiency aboard the *Essex* class carrier falls off markedly, but the *Forrestal* carriers can maintain a high operational tempo. The reason is fairly simple. There is just not enough room aboard an *Essex* class carrier to simultaneously operate modern aircraft, adequately perform the exacting aircraft maintenance required by complex aircraft systems, and at the same time carry on the routine of living.

Thus, all factors considered, a modern attack carrier must be about *Forrestal* size, and must incorporate comparable aviation features and facilities, in order to insure that the ship is capable of carrying out its mission effectively and safely.

NUCLEAR VERSUS CONVENTIONAL PROPULSION

Mr. Chairman, I would now like to briefly discuss the question of propulsion and associated considerations for the ship in the current budget request.

There are no misgivings about the existence of military advantages in a nuclear powered aircraft carrier. These have been stated before, and are still true. The one that stands out above all others is the capability for extended range and endurance at high sustained speeds. In light of increasingly accurate knowledge of the additional cost, however, these advantages simply do not compare well with the military potential in other needed areas which can be purchased for this money. The construction cost of the *Enterprise* has been more than anticipated. Submarine experience has shown that the operating and fuel cost is considerably higher than is that for conventional power. In terms of what nuclear power brings to submarines, this is still cheap. For example, its independence from the atmosphere—a requirement peculiar to submarine propulsion—and its endurance characteristics, have provided the submarine a new operating dimension. The character of submarines has been completely changed by this new propulsion system. This conclusion, however, cannot be applied so certainly at this time to nuclear power in an aircraft carrier.

The difference in first cost between a nuclear powered carrier and a conventionally powered carrier, equal in all respects save nuclear power, is, as you know, about $130,000,000.

With the consent of Congress, this money will be applied this year to other essential naval ship construction, aircraft and missile programs to meet requirements in those areas.

The conventionally powered carrier in the fiscal year 1961 budget will meet the urgent need for a new attack carrier with appropriate facilities for handling modern, high performance aircraft. It will have the most modern electronics and the most accurate and powerful radars known to our technology. Its elevators, catapults, and flight operating equipment will be of the required capacity for any aircraft now envisaged. It will provide the most advanced features of seaworthiness. Significantly, it will be slightly faster than either the *Enterprise* or a new nuclear carrier of corresponding size.

This ship will be capable of steaming halfway around the world at cruising speed. It will be able to operate at high speed for the necessary periods in all conceivable tactical situations. It will carry large amounts of aviation fuel and ammunition. It will be fitted for rapid replenishment and striking down of fuel and ammunition so that logistic operations will encumber it to the minimum possible extent.

In short, it will be able to carry out its mission of supporting and operating modern combat aircraft without any compromise whatsoever in aviation features.

Mr. MAHON. Thank you very much. We are pleased to have this further statement in regard to carriers. I believe, Mr. Secretary, that completes your presentation.

Secretary FRANKE. It does, Mr. Chairman, unless the committee has other presentations it would like to have.

Mr. MAHON. I think we should have a period for questions at this time.

ADEQUACY OF NAVY BUDGET

Secretary of Defense Gates has been before us with General Twining. They painted what I called at the time a rather rosy picture as to the overall power and adequacy of U.S. defenses and the Defense budget. They sought to reassure us that we had no serious cause for alarm with reference to the adequacy of our defense program. Of course, the previous witnesses recognized that we live in a dangerous world. I am not trying to distort the picture.

Secretary Gates said on page 33 of his mimeographed statement the following:

> This budget does not provide everything that everyone would like to have, but in my judgment it does provide for those programs which are essential to our national security. The Joint Chiefs of Staff have assured me that they will support this budget.

The tone and tenor of your presentation and the presentation of Admiral Burke has been decidedly different, in my opinion, from the presentation of General Twining and Secretary Gates. Considerable time has been utilized today in showing the weaknesses of the Navy's position and in showing the inadequacy of the 1961 budget. That is my deduction. Is it a fair one?

Secretary FRANKE. Mr. Chairman, I think from my statement you may have gotten some of this feeling because I quoted the total that the Navy had requested, the bureaus and offices of the Navy, some $19 billion. The reason I quoted that is because the committee always asks me that question and I thought it well to put it in my statement. It does not mean Admiral Burke and General Shoup and I agreed with all of the items in the $19 billion request or that we would buy them even though we had this amount of money.

What it did convey to us and the reason why we asked for this information to be sent to us is the overall requirements that Navy operating people think they should have—this is the only way I know of that we can be sure not to miss some vitally important programs. If we restricted the presentation to a predetermined sum of money, we might be failing to buy things that are more important than the things we do buy.

However, I also said in my statement that I felt this budget was the best balanced budget I had seen in 6 years. In this way I subscribe to what the Secretary of Defense said. I believe this is a good Navy budget. It does not mean we have all we want and, of course, no budget will ever do that.

Mr. MAHON. Even though you do not have all you want, you think the budget is adequate for the fiscal year 1961?

Secretary FRANKE. Yes, sir; I do.

Mr. MAHON. Do you subscribe to that statement, Admiral?

Admiral BURKE. Yes, sir; I support the President's budget.

Mr. MAHON. Admiral Burke, I take it very definitely from your statement you do not feel the budget is fully adequate to meet Navy needs.

Admiral BURKE. I have had an opportunity to express my views to the Secretary of Defense and to the Bureau of the Budget and to the President, and I have stated my views. I realize they have problems that are greater problems than just my problems and the problems of the Navy. They made the decision. I accept and will support their decision. I think it is a good decision.

Mr. MAHON. But you will not agree that the budget is fully adequate to meet Navy requirements?

Admiral BURKE. Yes, sir; it will meet Navy requirements this year. The thing that worries the Navy most is the future capabilities. Each year we are slipping a little bit. Our shipbuilding and aircraft procurement are low. We are slipping a little bit; but this budget will meet our present requirements.

SIZE OF THE MARINE CORPS

Mr. MAHON. General Shoup, we have been battling through the years over the numerical size of the Marine Corps. In previous years we have provided funds above the budget to maintain the Marine Corps at a certain level above the budgeted number.

Last year, as I recall it, the bill enacted into law provided funds above the budget to maintain the Marine Corps at a strength of 200,000 men rather than 175,000 men. How much money did we provide, Admiral Beardsley, for that?

Admiral BEARDSLEY. I would say between $35 and $45 million, approximately.

Mr. MAHON. Get the figure for the record.

Admiral BEARDSLEY. I will insert it in the record.

(The following amounts were provided:)

	Million
Marine Corps, personnel	$32.7
Operation and maintenance, Navy	5.9
Operation and maintenance, Marine Corps	4.5
Total	43.1

Mr. MAHON. What do you think about this, General Shoup? Should we concern ourselves any more about this problem or go along with the 175,000 strength for the Marines?

General SHOUP. I would like to make some observations with respect to that question and give a little bit of an idea how this 200,000 and all these different figures come about. We have a legislative requirement for three combat divisions, three wings and also our mission.

Mr. MAHON. What is the legislative requirement?

General SHOUP. Three combat divisions and aircraft wings and supporting forces to go with it. Also, we have a mission. We also have, as approved by the Joint Chiefs of Staff, not only general war but limited war requirements. The Marine Corps gathered together the most intelligent and versatile minds that we could and tried to come up with what the Marine Corps would need in organization and composition in these three combat divisions and wings to do our jobs. This was translated into terms of numbers of men, at the same time keeping in proper view the fact that we could, with the three combat divisions and wings, be deployed in a limited war and at the same time could be called upon to go into general war and keep on fighting right on through.

This study resulted in an organization and composition of our forces which required in the neighborhood of 234,000 men. I believe this requirement is correct on the basis of that way of thinking.

Mr. MAHON. Do you think it is correct today?

General SHOUP. Yes, sir; on that basis of thinking.

Mr. MAHON. You do not think conditions have changed enough to vary those numbers?

General SHOUP. I do not think so if we go on the basis that we are deployed, busy, and general war comes and we have to keep on fighting. We have to have something in between the time they pull the strings for the general war and the time we get our reserves and our mobilization forces and get them into the divisions that are fighting to sustain them in fighting. Of course, then there is a matter of judgment and decision and determination as to just what extent that ultimate situation will reach. This again is a matter of determination and how much risk you want to take and what the enemy is going to do. This is a very difficult thing to determine.

However, considering the fact that it is unlikely that all three divisions will be deployed and fighting in a general war at the same time, we determined that in order to have a force that would permit us to put the three divisions in the field and do a reasonable amount of fighting and also be ready to receive replacements from our reserves and other sources, it would take about 200,000 men; then we could keep going.

The 175,000 in this budget, which has been in two other budgets—after all, we have gone through this for 2 years now or soon will have—and this does provide us the ability to at least deploy these three combat divisions and aircraft wings although there is not anything left to back them up with. We could not fight very long, but the three divisions and three wings could be put into combat. Those who have some idea of the capability of a Marine division as it is organized recognize we could do a considerable bit of fighting with three divisions and three wings or any incremental parts of them.

As to the requirement for 200,000 it is there as it has always been, if you put yourself in that particular position. It is also there for 234,000 if you likewise put yourself in the position to take care of that related situation; 175,000 men will enable us to field three combat divisions and three wings, but we will not be able to stay and go on into a general war because there will not be anything in the pipeline. We will be done. We can only do so much.

It is a question whether the 25,000 men will put this Nation in a better condition. Within the Department of Defense it was determined this year again that 175,000 men would be the number of men we could have to do our job.

I believe with the forces available within the Defense Department, the Marine Corps' 175,000 men will do the job intended to be done by 175,000 men.

We have the funds in this budget to pay the 175,000 men, to take care of the operation and maintenance, and to pay our reserves and to build up our mobilization reserve. About 8 percent of the procurement estimate is for mobilization reserve and some 80 percent is modernization. We are making good progress.

There is an interesting thing in this personnel business. I think this is something that perhaps has never been brought out, and it was perhaps not discernible until the past year or so. About 1953, as some of the members here will remember, the Marine Corps started what I call a complete mental and educational metamorphosis in the area of supply management and financial management. We are just beginning to really get some dividends from that, and that is evidenced, I believe, by some of these figures I would like to give you now.

In 1957, although we had 200,000 men in the Marine Corps, we had some ninety-nine to a hundred thousand men in the Fleet Marine Force. As we have gone down to 175,000, about 17,000 of that 25,000 reduction came out of our supporting forces and only 8,000 from our Fleet Marine Force—that is, the fighting units we are talking about.

The reason for that is better management in our stations. In this year to come, fiscal year 1961, we visualize that we will come up about 7,000 men in our Fleet Marine Force, which will give us back some of these units we determined last year to eliminate rather than to run at 80 percent, or whatever it is, of strength. The reason was if you want to mount out a unit, you better have it ready to go than to have to rush replacements in. That was the decision made last year.

Our 4-year enlistment and our method of rotating entire battalions to the Far East is producing a considerable saving in personnel. At the same time, there is this business of better management in which we have taken some 17,000 military people, from our stations, which is in addition to a reduction of some 1,900 civilians, and we are still running the stations. We have gotten everybody in the business of managing our funds and having it as a command function. We did not have that before 1953. I consider that a good deal of this saving in personnel that we will realize here in this fiscal 1961 is related to this as well as our long-term enlistments. As long as we can keep the long-term enlistments up, we will be able to put into our Fleet Marine Force within three to three and a half thousand men of the same number we were able to do when we had a strength of 200,000.

At the same time, sir, those 25,000 extra men were in the Marine Corps, they were trained, and they were available if we had to go. That is the difference. We had more backup.

Mr. MAHON. I see. You have reduced some of your units. Are you going to replace them now?

General SHOUP. Yes, sir; we plan this year with these personnel savings to replace two battalion teams and have a new HAWK battalion, but during the course of this year I will watch this thing carefully and reconstitute as many of these fighting troops as we can.

As I pointed out, I feel toward the end of this fiscal year, if our plans and estimates work out, we can be back to about three to three and a half thousand men in our Fleet Marine Force; with 175,000 men, we will be within that number of what we would have or what we had with the 200,000.

ROLE OF MARINE CORPS IN GENERAL WAR

Mr. MAHON. That is a very interesting and very encouraging statement. I think you deserve a lot of credit for being able to do that.

In view of what a general all-out war would be like, can you plan very accurately for what your function would be in the event of an all-out war and for the period of transition from limited war to all-out war? I do not see how you could plan that very well.

General SHOUP. One with average imagination could, I presume, say that if there were an exchange of nuclear warheads, a lot of these things we think we would be going to do in the event of general war, we

would not get underway quite as fast. We might not have the ships, airplanes, or anything else. I do not know how good the enemy would be in the exchange. It does not take a very great imagination to say you are not going to go very far if we have an exchange of nuclear warheads. This is perhaps true.

Our forces are deployed, our Marine Forces are deployed in several different locations—it is that old hope that you cannot get them all and those that go will need help and replacements and more equipment. So we make our plans on the basis that they are not going to get us.

Mr. MAHON. So much for the adequacy of the budget in that respect.

BUDGET FORMULATION

Mr. Secretary, at page 3 of your statement you indicate that the first effort at preparing the 1961 budget consisted of estimates equal to obligations for 1960 plus 10 percent. This was on May 12, 1959, or before congressional action on the 1960 appropriation act. What figures were used for the 1960 obligation at that time?

Secretary FRANKE. It was the obligation plan then in existence prepared by the Secretary of Defense's Office, but I think you are asking for the dollar amount.

Mr. MAHON. Just insert it in the record.

(The information to be supplied follows:)

As reflected in the President's fiscal year 1960 budget message, $12,081 billion.

Mr. MAHON. What adjustments were made for programs of declining value and, conversely, what adjustments were made for programs of increasing significance?

Secretary FRANKE. Are you talking about part 1 only now or the total Navy request?

Mr. MAHON. Part 1.

Secretary FRANKE. In part 1 we recognized that personnel occupied a more or less fixed position and, therefore, that any estimates for personnel would not be subject to much change. We also recognized that POLARIS had a very high priority and there was not much we could do about POLARIS. When we sent out the request for budget estimates to the Navy, we excepted those.

With respect to all other programs, however, we said to send us in the first part what we considered to be the more or less priority items, or first priority items, equivalent to the direct obligations for the fiscal year 1960 plus 10 percent, which we felt gave some leeway for new programs and also for elimination of old programs to be substituted by new programs.

This was our first approach. What we were really trying to do was this. There have been so many thousands of hours spent on preparation of budgets which did not prove to be very fruitful that we were trying to separate the high priority programs, which we could examine at first blush, both by the Navy Comptroller and the Chief of Naval Operations Advisory Board; then to supplement those with others of lesser priority presumably, so that we could look at them separately. This was the whole purpose of this exercise. This is new, we have never done it this way before.

Mr. MAHON. What was the purpose of adding the 10 percent?

Secretary FRANKE. To give flexibility. In other words, we felt it is possible over the years as the gross national product increases perhaps the Defense Department budget will increase by something of the same amount. That was the purpose for the 10 percent. Items in our budget still were going to be eliminated or increased as the result of individual program reviews. It was a yardstick of a kind, so to speak.

ITEMS REQUESTED BY NAVY BUREAUS NOT INCLUDED IN BUDGET

Mr. MAHON. You mentioned a while ago a figure of $19 billion plus. On page 4 of your statement a number of figures are shown, the totals arrived at during various phases of budget preparation. These range from $11.2 billion to $19.3 billion. Could you discuss the elements of difference briefly now and when your budget officer appears at a later date with the Assistant Secretary of Defense, Mr. Lincoln, have him place in the record at that time a tabulation of the various estimates by appropriation title and budget activity.

Secretary FRANKE. I have a detail of the difference between the $19 billion that the Navy presented to me as the Secretary and the present amount of the congressional budget. I also have a table of the difference between the Secretary of Defense's preliminary planning figure and what the Navy eventually got from the Secretary of Defense. There are a great many items in this. There are 25 items in the Navy table alone, plus 11 for the Marine Corps.

Mr. MAHON. What are the big items?

Secretary FRANKE. By illustration, the $19 billion included, 1,339 aircraft.

Mr. MAHON. As contrasted with how many in the budget?

Secretary FRANKE. 658 in the budget. It included 35 additional ships and 7 conversions. Incidentally, the first figure of the aircraft amounted to $1,663 million. The additional ships and the seven conversions of ships amounted to $1,062 million.

Mr. FORD. What were the major ship additions?

Secretary FRANKE. Mostly antisubmarine warfare ships of all types and descriptions. No carriers in this figure.

Mr. MAHON. Any submarines?

Secretary FRANKE. Yes.

Mr. MAHON. How many submarines?

Secretary FRANKE. I do not think we have that at the moment. I can get it and submit it for the record.

Mr. MAHON. Very well. We need something here that will give us at a glance what the real differences are. You can put that in the record at this point.

(The information requested follows:)

FISCAL YEAR 1961 BUDGET

Summary of major program differences between Bureau submissions to NAVCOMPT on July 2, 1959, and the President's budget

1. Reduced Navy personnel strength, 11,000 to 619,000.
2. Reduced number of active fleet ships from 864 to 817.
3. Number of average operating aircraft reduced approximately 300 and number of flying hours reduced 500,000.
4. Aircraft procurement reduced by 681, from 1,339 to 658.

5. Eliminated 35 new construction ships, including 3 fleet ballistic missile submarines and long leadtime procurement for 6 additional FBM submarines, and 7 conversions. Changed CVA(N) to CVA. New cost concept instituted.
6. Expendable ordnance and other weapons and support equipment reduced.
7. Ship support equipment (electronics, shipboard components, etc.) reduced.
8. Reduced research and development effort to approximately the fiscal year 1960 level.

Mr. MAHON. Tell us of some of the differences.

Secretary FRANKE. The POLARIS program. We have now 12 ships plus advance procurement for 3 more. This would have added 3 more through 15.

Mr. MAHON. This would have financed three more POLARIS submarines?

Secretary FRANKE. Yes, sir.

Mr. FORD. Fully funded?

Secretary FRANKE. Yes, plus advance procurement for nine instead of three. We now have in this budget request, as you know, three fully funded and three for advanced procurement. This would have added three more fully funded and six more for advanced procurement, plus more missiles, more POLARIS missiles, and more POLARIS research and development. This is a $583 million item. Ship support equipment, electronic, shipboard components, et cetera, $573 million. Expendable ordnance and other equipments and aircraft support equipment, $793 million. Research and development, $738 million. Those are the major items.

Mr. MAHON. Where was the additional research and development money to be applied?

Secretary FRANKE. Some in POLARIS, some ASW, some Pacific Missile Range, and then there were other categories of varying descriptions.

REASON FOR DEVELOPMENT OF $19 BILLION PROGRAM

Mr. MAHON. What benefit was derived by the Navy in the preparation of this budget by this exercise on the $19 billion?

Secretary FRANKE. The principal purpose of this exercise was to give the Secretary and Chief of Naval Operations and Commandant overall information as to what the operating people in the Navy and the bureaus and offices of the Department of the Navy felt they would like to have if there were all this money available. As I said before, I think that unless we get this kind of information and put it through the various screening procedures in the Navy, we might very well miss programs that are more important than the programs we would otherwise buy or propose.

I think also if you said to the bureaus and offices of the Navy, "You will come up with a budget of a predetermined, fixed amount," this does not give anyone a chance to express his own ideas and it destroys initiative and imagination. It is a long process but I think it is worth while.

Mr. MAHON. Under this $19 billion program, if you call it a program, outline definitely the increases which would be included for the POLARIS program.

(A classified statement will be furnished to the committee.)

Mr. MAHON. I would like to have the details as to what your people thought they would like to do in ASW warfare beyond the present

budget. You have touched on that but I would like to get that information in one package right here. Will you give us a statement now and then you can polish it up for the record. Let anyone you wish supply this information.

Secretary FRANKE. I asked this question this noon, as a matter of fact, whether we had complete detail. It is something over $100 million of R. & D. effort.

Mr. MAHON. We are talking about the whole package for ASW?

Secretary FRANKE. This is only the R. & D. part of it.

Mr. MAHON. This gives us an idea of the thinking of the people in the Navy which we will not get otherwise.

Admiral BURKE. We have this broken down in various priorities. (Priorities of assignments of funds to ASW effort in seven increments were given off the record.)

Mr. MAHON. That adds up to what?

Admiral BURKE. A little over a billion dollars. To summarize, I will submit an unclassified tabulation for the record.

The unclassified tabulation referred to follows:

Fiscal year 1961 summary of additional ASW needs

Category	*Cost in millions*
R.D.T. & E.:	
Classification and detection	$89.298
Weapons and ordnance	18.684
Vehicles and propulsion	15.771
Collateral support	9.885
Total	133.638
Ships	648.700
Aircraft and supporting equipment	93.000
ASW ammunition	127.240
ASW electronics procurement	20.969
Total	1,023.547

(A detailed classified statement will be furnished the committee.)

Mr. MAHON. And your highest priority is research and development?

Admiral BURKE. Half of the highest priority is research and development. Out of a $200 million increment, we would like to have $100 million for research and development.

ANTISUBMARINE WARFARE COMMITTEE

Mr. MAHON. When did you establish the antisubmarine warfare committee, Mr. Secretary?

Secretary FRANKE. In November.

Mr. MAHON. Have you had some meetings?

Secretary FRANKE. We have had two meetings.

Mr. MAHON. Has that committee reviewed the priority package presented here?

Secretary FRANKE. Not as yet. It has not had time.

Mr. MAHON. Has it undertaken to review the action taken by the Congress last year on the antisubmarine warfare program?

Secretary FRANKE. Yes, in a way.

What the committee is really doing is to first bring in everyone involved in antisubmarine warfare to express his own ideas and beliefs and to give us the benefit of what he thinks we should be doing in antisubmarine warfare.

Now, a committee is a very simple thing to form. I do not happen to like the use of committees in the Navy Department too well, but I do not know any better way, for Admiral Burke and I to keep ourselves fully informed of what the thinking is in the Navy about antisubmarine warfare and to take advantage of all of the ability and initiative and imagination of people than to do it this way.

COST OF NUCLEAR-POWERED CARRIER

Mr. MAHON. With respect to the cost of the nuclear-powered carrier now under construction, do you think the present figure given us is quite firm? I am talking about the figure given in your statement.

Secretary FRANKE. We think so. We are over the heavy part of this. We are in the process of building one and it is a little more than half finished. We have experience back of us. I have checked this again and again with the Bureau of Ships and they tell me that the figure they have given me, which is included in this statement, is a sound figure.

Mr. MAHON. The $471 million is a sound figure?

Secretary FRANKE. Yes. Admiral Burke reminds me he and I went over the *Enterprise* 2 weeks ago to get a firsthand knowledge of what the status of the ship is and what the problems of the men are.

Mr. MAHON. Just a few weeks ago you eliminated the TERRIER from the carrier in order to hold down the cost?

Secretary FRANKE. In November.

Mr. MAHON. How much did that save?

Secretary FRANKE. About $23 million.

Mr. MAHON. Do you think later it will be necessary to add that, Admiral Burke?

Admiral BURKE. Perhaps not the TERRIER, but something else—maybe an improved missile. We have expectation of having an improved missile but not while the ship is being built.

Mr. MAHON. It would be an add-on after the ship is constructed?

Admiral BURKE. Yes.

INCREASED COSTS FOR SHIP CONSTRUCTION

Mr. MAHON. Secretary Franke, the Navy's budget for 1961 includes $829.2 million for the estimated increased costs of ships for which funds were previously appropriated. That figure is surprisingly high, it seems to me. I anticipated that some funds would be required, but this figure seems shockingly high.

Admiral BURKE. It is very high. It is due to a number of factors. In the first place, we are talking about a new method of pricing to completion, and in the second place, it reflects the additional costs of brand new types of ships which we have never built before; the *Enterprise* being one, the nuclear frigate being another, and the nuclear cruiser being another. There are a number of ships which have exceeded any previous estimates that I had of costs as these ships went along. It is, of course, true over the years as wages and material costs have increased, we have had to come back to this committee regularly to get money to fund the additional costs we did not anticipate. Some of them are beyond our control. Others, however, are within our control. I do not mean to say for a moment that I am

satisfied with the pricing we have done, but I do realize there have been very difficult problems involved in new ships.

Mr. MAHON. To finance this need, five ships in the 1960 program were not started and the $317.5 million appropriated for those ships was applied against the increased costs.

Were there any other ships from prior years' programs eliminated from the program to cover this increase in cost estimates?

Admiral BURKE. No, there were not.

Mr. MAHON. What were these five ships?

Admiral BURKE. Three guided-missile frigates, one escort research ship (which came out not for this reason, but because we were not ready to build it), and a cruiser conversion.

Mr. MAHON. Are these ships back in the fiscal year 1961 program?

Admiral BURKE. Three DLG's of the same type and an escort research ship are, but the guided-missile cruiser conversion is not.

FUNDS FOR NEW SHIPS APPLIED TO INCREASED COSTS OF OTHER SHIPS

Mr. MAHON. How many ships are involved in the total unfinished ship program?

Admiral BURKE. Something like 100 ships.

Mr. MAHON. How many ships have been canceled in previous years and funds applied against the increasing costs of this program? In other words, you have canceled out five ships for the fiscal year 1960. What have you done in previous years along the same line?

Admiral BURKE. Well——

Secretary FRANKE. We have canceled a lot of ships in previous years.

Mr. MAHON. I know you have. Do you have readily available statistics on that?

Secretary FRANKE. Yes. I can furnish this tabulation here. We have this back to 1952, as a matter of fact; what has happened each year.

Mr. MAHON. Supply that for the committee in the morning and for the record, if it is so decided.

(The requested tabulation has been supplied to the Committee.)

PRICING OF SHIP CONSTRUCTION

Mr. MAHON. In whatever statement you give us with regard to ships canceled out in previous years, you ought to show whether or not they were reinstated in succeeding years or else the tabulation will be more or less meaningless.

It is noted that you are asking for $230 million to provide for future cost growth of the shipbuilding program. How did you get at this figure? Is there some reasonable, rational basis for the calculation, or is it more or less picked out of the air?

Secretary FRANKE. It is based on what has normally happened in the shipbuilding program in this highly technological age we live in. The biggest item is $144 million for possible and probable increases in labor and materials following the pattern that has existed in past years.

Mr. MAHON. You have included in your estimates provision for a continuation of inflation?

Secretary FRANKE. That is correct.

Mr. MAHON. To what extent have you included design changes and other modifications?

Secretary FRANKE. We have about $43 million in here for possible characteristic changes—those that can be anticipated at the present time. They do not include the "gleam in the eye" sort of thing, the sort of thing that might come in the future.

Mr. FORD. It seems to me in the past we have never anticipated any wage increases in our funding program. This appears to be a very decided change in the budget process. Does this very drastic change have the approval of the Bureau of the Budget?

Secretary FRANKE. It has been discussed with the Bureau of the Budget and they have approved.

Mr. FORD. Is this same point of view going to prevail in the Army and the Air Force budgets on this particular point?

Secretary FRANKE. I would rather doubt it. I am not sure of this, but I would rather doubt it because of the long building time of the ships. They fall into a different category.

Mr. FORD. This is an exception to the established rule, as far as you know, of the Bureau of the Budget?

Secretary FRANKE. As far as I know.

Admiral BURKE. Perhaps I could amplify. In the aircraft program we are buying ——— A3J's. If the funds do not quite buy that many we will get ——— something less. But it does not affect the program. In ships you cannot do that because you will have a ship three-fourths completed and you have to get the additional money. As with aircraft, the same thing is true in buying torpedoes or anything else that you buy in quantity. You take a lesser number if the funds do not buy out the whole program.

PROBLEMS IN COMBATTING SUBMARINES

Mr. MAHON. Is it possible to acquire adequate antisubmarine warfare capability with additional money? Could we do a better job of assuring ourselves of a defense against the advanced type of submarines that are coming into existence solely by increasing appropriations? Could we protect our shipping and our shorelines and interior from submarine missiles by spending more money?

Admiral BURKE. There is no way that we can guarantee, no matter how much money we have, that we could get all of the submarines before they could do damage to us. But we have made some phenomenal progress in the last 3 or 4 years in our detection devices. We are on the verge now with the new sonars, the new sonobuoys, and the new types of equipment where, if we can get these into the ships, we will have a significantly increased capability. We can hurt nuclear-powered submarines and handle a good many of them. There is no defense that will be absolutely perfect. We have done pretty well in the last year or two with some equipments against nuclear-powered submarines, but we do not have very many of these equipments.

Mr. MAHON. I believe that you said last year, and I believe you said again this year, that the growth of the submarine itself, and the development and increase in capability of the submarine itself was still greater than the growth of countermeasures.

Admiral BURKE. Yes, that is true. The reason for that is that nuclear power was a tremendous breakthrough. We have had no

breakthrough in antisubmarine warfare and we do not expect a breakthrough. The scientists advise us there is no system they can think of that will give us a breakthrough.

We have had tremendously improved performance in these new equipments and the various systems of detection. We think that we will be able to give the nuclear-powered submarine a rough time.

Mr. MAHON. That is a desirable situation. Whether it can be improved upon, I do not know. I would like to have your comment on it.

Admiral BURKE. It goes back to generalizations—there is no defense against aircraft which will prevent some aircraft from getting through.

With regard to these detection devices on surface ships, as Admiral Yeager stated, the detection was about ———. In 1959 we got it up to ———.

Mr. MAHON. The point you are making here—and maybe you will not want to give the distances on the record—is that you have improved the range and capability of your antisubmarine devices?

Admiral BURKE. Tremendously, and we can detect the submarines and kill them at long ranges, but it takes large numbers of ships and large amounts of this equipment.

Mr. MAHON. But the submarine is becoming faster than many surface ships and your difficulty, it seems to me, is multiplied.

Admiral BURKE. The submarines are faster than many surface ships but, if you have screening surface ships through which the submarines must go, they must come to you to attack. In that case you kill them. On the other hand, when they head for a position to fire against the United States, or against an oversea base, you have to go out and search for them. Once you detect a submarine, and if it is within range, it does not matter how fast it is. You fire and kill it.

Mr. MAHON. One of the big problems involved here is that the seas are so very great and there are so many places where submarines can maneuver it seems almost impossible to find a way to adequately counter this threat. I have no panacea.

Admiral BURKE. That is true. In World War II it took tremendous quantities of antisubmarine warfare ships to handle the submarines menace, and it will again.

Mr. MAHON. The submarine then was a very poor weapon compared to what it is today.

Admiral BURKE. But our antisubmarine warfare systems were also very poor comparatively speaking. It has been pointed out to me that, with the use of helicopters and planes also, we can keep up with the speed of the submarines. That is why we are putting helicopters aboard ships.

USE OF SUBMARINES IN ASW

Mr. MAHON. Is there a growing opinion in the Navy that perhaps the submarine itself should be employed more generally as a weapon against enemy submarines?

Admiral BURKE. Yes; and we do employ all of our attack submarines that way in training.

Mr. MAHON. To what extent is there some revision in thinking with respect to this question?

Admiral BURKE. There has been complete revision in the last 5 or 6 years, or perhaps a little longer. Up to the time of the Korean war we never planned use of the submarines in antisubmarine warfare. Since then we have gradually increased use of submarines until now all of our attack submarines are considered to be antisubmarine warfare units. The difficulties in use of a submarine against another submarine are, first, identification; and, second, weapons. SUBROC will help the weapon difficulty a great deal if we can develop it.

A submarine is pretty blind. Now a submarine is very valuable in coordination with something else, such as coordinated work with surface ships and aircraft. It is very valuable by itself under many circumstances, but it is limited in its capability because it is blind. It can hear, but it has difficulty in identification.

There is another trouble with submarines. You have to protect your ships at sea, all kinds of ships against all the threats. A submarine is of little value to counter the other threats. So the combination of submarines, aircraft, and surface ships—each one with peculiar strengths and weaknesses—as a team develop tremendous strength which is greater than that of any single element. Submarines are coming in more and more and we will use them more and more as a part of the antisubmarine warfare element.

Mr. MAHON. I am beginning to hear from time to time, and for the first time, the submarine itself is the best instrument to use in attacking another submarine. I am just trying to explore that allegation.

Admiral BURKE. The submariner thinks so, and there is a lot of truth in that thought under many circumstances. But patrol aircraft with these new sonobuoys, Jezebel and Julie, also perform some marvelous functions. We have obtained very fine results.

Mr. MAHON. We have never fought a war in which the modern atomic submarine was available to the forces of any country. The old-fashioned, slow, nonatomic submarine has been with us, however, a long time. We were not confronted with submarines in the Korean war, so the last time we had submarines engaged in active conflict was World War II. During World War II the submarine itself was not utilized as an instrument against enemy submarines to any great extent, was it?

Admiral BURKE. Not until the very last part. Against Japanese submarines they were.

Mr. MAHON. How many submarines were sunk by submarines during World War II, insofar as you know?

Admiral BURKE. In the neighborhood of about six, I think. I think that we sank six but I am not sure of that.

Mr. MAHON. When you get the transcript, if you have information which is appropriate, you may put it in the record.

(The information requested follows:)

AXIS SUBMARINES SUNK DURING WORLD WAR II BY UNITED STATES AND ALLIED SUBMARINES

During World War II Allied submarines sank a total of 66 Axis forces submarines: 22 German, 25 Japanese, and 19 Italian. Of these 25 (23 Japanese, 2 German) were sunk by U.S. submarines.

Six of the 25 Axis submarines sunk by U.S. submarines in World War II were sunk in the process of diving or surfacing.

PERCENTAGE OF BUDGET FOR ASW

Mr. MAHON. What proportion of the 1961 Navy budget could be said to reflect a major contribution to antisubmarine warfare?

Admiral BURKE. It is just about the relative proportion that Admiral Yeager gave.

Mr. MAHON. About 29 percent of the procurement budget, including research, development, test and evaluation, is devoted to antisubmarine warfare?

Admiral BEARDSLEY. Yes.

ESTIMATED LIFE OF SHIPS

Mr. MAHON. In view of the fact that we seem to be in the most amazing period of technological change in the history of the world, what do you think about the estimated 20-year life of ships, the 20-year yardstick you more or less apply to ships, Admiral Burke?

Admiral BURKE. I think that it is still valid. Of course it varies with the type of ship but it will continue to be a good yardstick. All of our allies and many of our own forces are overseas. Support must be carried in surface ships, or 99 percent of it. That means that we have to use the surface of the seas. If we cannot use the surface of the seas then all of our material, people, and allies abroad or overseas will fall fighting with the equipment that they now have. Ships will have to be useful. If they are not, then we are isolated in the United States.

Now, we can defeat aircraft. Ballistic missiles are of no value against moving targets in an unknown location. The biggest danger to ships at sea now is submarines. I feel confident that in 2 or 3 years, if our progress in antisubmarine warfare is as great as it has been, we will be in a comparable position to that we had in World War II. The balance between submarine and antisubmarine warfare will be about the same, though submarines now have a tremendous capability. As you pointed out, we have never fought a war with nuclear submarines. Neither have the submarines fought against nuclear depth charges and neither have they been hit without knowing any enemy is near. They have a lot of problems.

Mr. MAHON. The committee will stand adjourned until 9:30 tomorrow morning.

TUESDAY, JANUARY 19, 1960.

EFFORTS OF PRIVATE INDUSTRY IN ANTISUBMARINE WARFARE

Mr. MAHON. We will resume our hearings. With respect to antisubmarine warfare, are you using private industry and non-Government sources of information for counsel and advice as far as you think you reasonably can in order to find better answers to the problems involved in this highly important question?

Admiral BURKE. About 2 years ago we requested the NSIA——

Mr. MAHON. Will you spell that out, please?

Admiral BURKE. The National Security Industrial Association to appoint an antisubmarine warfare committee, which they did. They have spent a tremendous amount of their own money and a lot of time

with the actual production people in going over all of our antisubmarine warfare programs, getting new ideas, and helping to coordinate. They have exchanged information among themselves, which is most important. This has paid off in tremendous dividends.

In addition to that, we have a committee of our own scientists, our in-house scientists, which meets periodically to make sure all of our own laboratories are properly coordinated.

Another committee of scientists is also concerned with antisubmarine warfare. They are a part of the President's Scientific Advisory Committee. Thus we have three independent groups that survey the whole antisubmarine warfare picture periodically. Because there are people in two more of these groups there is an exchange of information. However, each group looks for slightly different aspects of the antisubmarine warfare picture.

Mr. MAHON. Will you give us the names of the people who have served on these committees, and the names of the people who now serve on these committees?

Admiral BURKE. Yes.

(The information requested was submitted to the committee.)

NUMBER OF U.S. NUCLEAR-POWERED SHIPS

Mr. MAHON. At the point where we discussed ships yesterday I overlooked asking a question which I would like to ask at this time.

How many nuclear-powered ships does this Nation have in being, under construction, or partially or wholly financed? You can supply that information for the record.

Admiral BURKE. Yes.

(The requested information follows:)

There are presently 37 nuclear submarines and 3 nuclear surface ships authorized for the Navy. The only other nuclear ship authorized to be built for the United States is the NS *Savannah*.

Of the Navy ships, 10 have been built, 26 are being built, and contracts are being negotiated to build the other 4.

In addition the Navy is requesting six nuclear submarines in the fiscal year 1961 shipbuilding program.

FUTURE USE OF NUCLEAR-POWERED SHIPS

Mr. MAHON. Mr. Secretary, do you foresee within this decade that the proportion of ships which are nuclear powered will be greatly accelerated? I will ask you the same question with regard to the decade beginning 1970. I want to ask the same question of Admiral Burke. Just how significant is nuclear power going to be in the Navy of the future?

Secretary FRANKE. I think it is going to be very significant. I think that you have to relate this, however, to two particular types of ships; submarines distinguished from surface ships.

The great problem of course at the present time is weight and cost of reactors. You ask what I foresee for the future. It seems to me our use of atomic power depends upon how fast we can develop nuclear power with lighter weight and lower cost. It appears to be inevitable that we will do both.

It is obvious that a surface task force with all nuclear-powered ships would be of great advantage to the Navy as compared to a sur-

face task force with one ship with atomic power, like a carrier. An all nuclear-powered task force has no requirement to refuel or return to base except for repairs, overhaul, or change of crew, yet does have requirement for other logistic support. So we will reach a much more advantageous position, it seems to me, when we get enough nuclear-powered surface ships to be able to have a task force consisting of all nuclear-powered ships.

I do not know when the day will come when we will have lighter or lower cost reactors. I think it is inevitable that it will come.

Mr. MAHON. You have not given me a very definitive or specific answer to the 1960 period and the 1970 period. Would you please go a little further?

Secretary FRANKE. I think in the 1960 period we will continue, of course, to build nuclear-powered submarines. I think in the 1960 period, with the beginning of nuclear power for surface ships, we will always want to continue building at least one surface ship. I do not anticipate that the number of nuclear-powered surface ships in the 1960 period will increase too greatly. In the 1970 period I think the situation could change completely because I think then we will be in a period in which we will get lighter weight reactors and lower cost reactors.

I would anticipate then we will greatly increase the number of nuclear-powered surface ships in the Navy and at the same time continue to build nuclear-powered submarines.

Mr. MAHON. In a year or so about 5 percent of the ships in the Navy will be nuclear powered?

Secretary FRANKE. In total numbers, including submarines.

Mr. MAHON. You can check that for the record. I wish you would give an approximate figure.

(The information follows:)

Thirty-seven will be completed by December 1962. This will be about 4.5 percent of the ships in the Navy.

Mr. MAHON. Will you comment on this question, Admiral Burke?

Admiral BURKE. I agree with the Secretary. We have been trying to reduce the weight per horsepower. We thought that we could reduce it faster than we are now doing. It is technically most difficult. We have not made as much progress as we anticipated in that particular line, nor have we been able to cut the cost as much as we had hoped. We have cut the cost a small amount by increasing the core life.

So I agree with the Secretary that in the 1960's we will want to keep at least one nuclear-powered surface ship under construction. We will probably build all our fleet submarines with nuclear power, and we will, if we can get a breakthrough in either weight per horsepower or cost per horsepower, go into more and more nuclear power for other types of ships.

Mr. FORD. Are not the two factors, weight per horsepower and cost per horsepower, as important in submarines as in the surface ships?

Admiral BURKE. No, sir. The weight per horsepower in both nuclear-powered and conventionally powered submarines is very high. You have to have both diesels and batteries in conventionally powered submarines, two complete propulsion systems, so the weight per horsepower in a conventional submarine is very high. Consequently, the

weight per horsepower is not as important as it is in a surface ship. The cost per horsepower, of course, is applicable across the board to all types of ships.

Mr. MAHON. If you are running two trucks between here and Detroit and one of them is diesel-powered and the other uses ordinary gasoline, you can very easily figure which one costs you the most to operate.

Admiral BURKE. Yes.

OPERATING COSTS OF CONVENTIONAL AND NUCLEAR-POWERED SHIPS

Mr. MAHON. I am a little fuzzy as to what the precise picture is as of today with respect to the actual cost of operating a nuclear ship as compared to a nonnuclear ship. Can you give us some enlightenment on that?

Admiral BURKE. Yes. We figure the cost on a cost-per-mile basis. Now, the cost per mile also varies with the speed. There is a most economical speed for each ship, usually around 14 or 15 knots for surface ships. If a ship goes at high speed, the cost per mile goes up.

There are quite a few variables. The cost per mile in nuclear-powered submarines over the life of the submarine now is about three or four times as much as the cost per mile in conventionally powered submarines. These figures are subject to many variables.

The cost per mile to operate a nuclear-powered submarine is dependent largely upon the core cost. Now, the core cost depends in part on how many miles you get out of the core, and we have increased the core life a great deal, about twice, so our costs are coming down but still not enough to compete directly on a cost basis with conventional power. We will probably not be able to do so for 4 or 5 years. One of the reasons for this is that we are extremely careful about our safety precautions. We probably have an excess number of safety devices, and we operate extremely carefully. We would rather do it that way and pay a little more than take chances.

Mr. MAHON. You cannot afford to take chances on having a submarine and its crew destroyed. That would be a catastrophe of great magnitude.

Admiral BURKE. Yes. Even breakdowns must be prevented.

Mr. MAHON. Let us get away from submarines and talk about surface ships. We know very little about nuclear-powered surface ships. What are the cost factors insofar as you can project them at this time—and you can put in any expert testimony you want on this issue—with respect to the nuclear and nonnuclear carriers?

Admiral BURKE. Cost comparisons of nuclear and nonnuclear carriers would be probably very similar to those of submarines except for one factor: the nuclear-powered submarines now go at higher speed than conventional submarines as a routine matter. In carriers we would not expect that, so the relative operating cost of a nuclear-powered carrier would probably be slightly less than the relative cost of a nuclear-powered submarine over conventional types.

Mr. MAHON. I understand you to say as of today the cost of operation, as far as power is concerned, of a nuclear carrier would be perhaps three, four, or five times as much as the cost of operation of a nonnuclear carrier?

Admiral BURKE. Yes. We expect it to be three to four times for power alone.

Mr. MAHON. The nuclear-powered submarine is so vastly superior to the nonnuclear-powered submarine that we are not too concerned about the increased cost. The performance is so much greater that they are not in the same league.

Admiral BURKE. That is correct.

Mr. MAHON. So we have no question there. Regardless of the question of cost of operating the nuclear submarine, we still want the nuclear-powered submarine.

Admiral BURKE. That is correct.

OPERATION OF NUCLEAR-POWERED CARRIER WITH NONNUCLEAR ESCORTS

Mr. MAHON. When you have nonnuclear surface ships surrounding a nuclear carrier in a task force you are in a little different situation, it seems to me. It seems to me that circumstance to some extent, downgrades the value of the nuclear power of the carrier. Will you discuss the pros and cons of that issue?

Admiral BURKE. It does not actually downgrade it. The carrier is not able to exercise its full advantage.

Mr. MAHON. That is what I am trying to say.

Admiral BURKE. Nuclear power in a surface ship will give that ship sustained speed. This is one great advantage, and for that reason even if only one ship is nuclear powered that particular ship does not have to stop other operations and be refueled.

Mr. MAHON. But it has to work in consonance with the other ships in the task force.

Admiral BURKE. But they are not close aboard in the present task force. You have 100 miles, maybe, between ships in some instances, so it gives you a great advantage. For example, you do not have to tie your carrier up refueling so much so that it cannot operate its aircraft. It can operate its aircraft while the other ships are refueling. This has its advantages. The nuclear-powered carrier also has advantages of a few more aircraft aboard, of better spotting of aircraft on deck, better arrangement of topside gear, islands and elevators and other necessary equipment. It has many incidental advantages. The big advantage is sustained speed. As we get experience we will be able to improve our performance, reduce the costs and get a better nuclear powerplant in the future.

Mr. MAHON. You cannot always have the sustained speed if you are going to replenish the supply of aviation fuel carried by your nuclear carrier in order that it may continue to keep airplanes operational. These planes do not use atomic power.

Admiral BURKE. That is correct.

Mr. MAHON. You have to slow down for that.

Admiral BURKE. That is correct, but we will refuel a nuclear-powered carrier only about half as often as a conventionally powered carrier because we can carry much more aircraft fuel in a nuclear-powered carrier.

The Secretary has just reminded me that the first complete overhaul of the *Nautilus* is costing us just about twice as much as we anticipated. This is the first overhaul. We are being extremely

careful. We are repairing things that perhaps do not really need to be repaired because we do not not know all safety aspects. The overhaul is running us at about $9 million, which is a terrific amount. The next one will not be so much.

Mr. MAHON. In other words, there are no bargain basement prices associated with nuclear power for ships?

Admiral BURKE. For costs; no, sir.

ADVANTAGES OF NUCLEAR-POWERED CARRIER

Mr. MAHON. Of course, cost is only one consideration in national defense. I am not saying it should be the only consideration. By no means should it be the only consideration.

You have more or less convinced me that for the time period of the next 10 years the nuclear-powered carrier may not be as superior to the non-nuclear-powered carrier as some of us had first thought. I do not know whether that is a fact or not.

Admiral BURKE. The nuclear-powered carrier will have advantages. They are the advantages of sustained speed and better arrangement plus some other things. It does have advantages. But the advantages of the nuclear-powered carrier over a conventional type carrier are not as great as the advantages of the nuclear-powered submarine over the conventionally powered submarine. This is primarily because a nuclear-powered submarine does not have to surface.

Mr. MAHON. Also because of the vast increase in speed of the nuclear-powered submarine.

Admiral BURKE. For long sustained speed; yes.

PRIOR REQUEST FOR NUCLEAR CARRIER

Mr. MAHON. Why did the Navy, Mr. Secretary, ask for a second nuclear carrier the year after the Navy asked for the first nuclear carrier? The nuclear-power ship was not tried. It had not been proven. It would not have the vast improvement over the conventional carrier that a nuclear-powered submarine has over the conventionally powered submarine. Was that good? That was about 3 or 4 years ago.

Secretary FRANKE. We asked for a conventionally powered carrier last year.

Mr. MAHON. I am talking about long before that. It sort of shakes my confidence to think that the Navy about 3 or 4 years ago asked for a second nuclear carrier and now it comes up and says that it does not want the nuclear carrier. It just does not look like the Navy has used good judgment, asking for a second nuclear-powered carrier about 3 years ago and now switching to a nonnuclear carrier.

Secretary FRANKE. I think what happened was we were so convinced that the nuclear-power was the answer to the future and that we were going to have such wonderfully successful results with it, both for surface ships and submarines, that we felt it was a modern improvement and probably we should go forth at that time. I do not think it was until later that we began to realize perhaps the great advantages we have in nuclear submarines might not be so attainable in nuclear surface ships.

Mr. FLOOD. I do not think that is the case. My opinion is, from what I have heard here for several years, and from what I have heard all over this city during the same period of time, if the Navy thought for 5 minutes there was not a budget restriction of $140 million on this carrier, vis-a-vis the other one, they would have asked for the nuclear carrier from the beginning. They would never have thought of asking for a conventional carrier, since the day they asked for the *Enterprise*. I do not think they ever had a conventional carrier in mind. When they asked for the *Enterprise* they meant from that day on that any carriers they were going to ask for would be nuclear, until they ran into budget problems. Then they say we have to have some kind of carrier. If we cannot get the $140 million, plus what else we need, then we will have to go back to where we started. That is the fact. That is the fact in the Navy today.

Mr. MAHON. Is that the fact, Admiral Burke?

Mr. FLOOD. That is my opinion. I mean the uniformed Navy.

Mr. MAHON. Is that the fact? I think Mr. Flood's statement is clear.

Admiral BURKE. We think, without doubt, a nuclear-powered carrier is better overall than a conventionally powered carrier. But it costs a great deal of money. There is no doubt about it, one of the major factors involved is a budgetary factor. It is one of the important factors. That is correct. It is partially a budget problem.

Mr. MAHON. Partially? 10 percent, 50 percent, or 90 percent budgetary?

Admiral BURKE. A high percentage. If we had no monetary restrictions we would buy a nuclear-powered carrier.

Mr. FLOOD. Period.

Mr. MAHON. What do you say, Mr. Secretary?

Secretary FRANKE. I do not know what you mean by budgetary restrictions exactly. If we were going to be given another $130 million and the Navy had its choice, I do not think we would voluntarily put the money on a new nuclear carrier. I think we are still in the area where there are many other things the Navy needs and wants that would justify putting the money elsewhere than in a nuclear carrier. It gets pretty far down the line in my opinion. So I do not think, Mr. Flood, it is entirely due to money.

Mr. FLOOD. That is a question of which came first, the chicken or the egg. Who said $130 million? What is magic about $130 million? That is an arbitrary budgetary restriction placed upon you by the Bureau of the Budget or the Executive, or somebody. Now, if you only are going to get $130 million then you say you will take a conventionally powered carrier plus $130 million worth of other hardware. But if you did not have a budgetary restriction; if you were not up against whatever you are up against—and I do not know what it is—you would never talk about a conventional carrier from the day you laid the keel for the *Enterprise*. Nobody in the uniformed Navy would ever think about a conventional carrier—this morning, nobody.

Mr. MAHON. Will you comment on that?

Admiral BURKE. The Secretary is quite right, if we had another $130 million we would not put that $130 million to get nuclear power. Mr. Flood is right, if we had unlimited money and we could buy what we thought we wanted, we would prefer a nuclear carrier.

Mr. MAHON. What else do you want to add?

Admiral BURKE. The conventionally powered ship we have requested will have the aircraft operating capability we need. Its aircraft handling capability will be 100 percent. It will be as good as a nuclear-powered carrier. As far as aviation features are concerned, the conventionally powered carrier and a nuclear-powered carrier are just about alike. The only difference is in the powerplant.

Mr. MAHON. Is this correct, Mr. Secretary and Admiral Burke, if you had all the money you needed for what you considered important functions of the Navy without budgetary restrictions, then you would, of course, ask for the atomic-powered carrier, but in view of the fact that there is a limit to the amount of money that can be available to you in this country, or any country, you feel that you should have the conventional carrier at this time?

Secretary FRANKE. I think that is a very fair statement. I agree with that.

Mr. FLOOD. Will you yield to me a minute?

Mr. MAHON. I would like to have the answer.

Admiral BURKE. Yes.

Mr. FLOOD. Will you yield to me? Now, that is not the premise that I stated, Mr. Chairman. I said nothing about a limited sum. You are talking about $130 million, for a nuclear carrier, or hardware, or a combination of both. Actually you are not talking about unlimited funds for this Nation or any other nation. You are talking about what they place at top priority for the $130 million. Are you going to give them another $130 million for a nuclear carrier? Must they have a carrier in the Navy? If they must have it, will you give them $130 million for what they must have first, and will you give them a carrier? It is $130 million. Money is not unlimited in this Nation, or any other nation. I am holding no brief for the carrier. I do not want to be placed in the position of defending the carrier one way or the other. That is not my position, but I do want the record to show what the facts are. I am stating the facts.

Mr. FORD. Will the chairman yield? Will the nonnuclear carrier requested here perform its assigned mission during the period of its lifetime?

Secretary FRANKE. In my opinion, yes.

Admiral BURKE. Yes, it will.

Mr. FLOOD. By "lifetime" do you mean 20 years?

Mr. FORD. Fifteen years.

Mr. FLOOD. Twenty years, conventional type, you say yes? Whee.

Mr. MAHON. Mr. Sheppard.

REQUEST FOR CONVENTIONALLY POWERED CARRIER

Mr. SHEPPARD. I find myself in a mental void, as it were, at present when discussing the carrier because of the different concepts. I do not want to necessarily belabor this particular issue, although it is perhaps important enough to do so. I want to say to my friends in the Navy that I think your position, insofar as the carrier is concerned, is untenable. That is my personal assumption, knowing your background and your operations over a period of years. It is not untenable with regard to the availability of funds, but untenable from the standpoint of what the Navy is always trying to do in keeping

their ships as modern as they can, or abreast of the modern concept, as it were.

You say that the conventionally powered carrier will perform all the functions that are necessary for a 20-year period. Assuming, Admiral Burke, that your weight factor that is involved here, in conjunction with the power element, could be radically reduced in the next 5 years, would you give us the same answer with regard to longevity and requirements that you have given now?

Admiral BURKE. As the weight per horsepower, and the cost per horsepower, come down, then the advantages of a nuclear-power carrier increase because it costs less to operate it. But, as far as the performance of the aircraft from these two types of carriers is concerned, conventional and nuclear powered, they are about the same.

Mr. SHEPPARD. Let me put the question in this way to perhaps clarify my thinking. If the nuclear-powered carrier cost the same money as the conventionally powered carrier, which would you take?

Admiral BURKE. The nuclear-powered carrier.

Mr. SHEPPARD. We will drop that operation. That is a good place to let it lie.

FUTURE OF OVERSEAS BASES

I notice reflected on page 4 of your statement a rather interesting comment which I will quote:

> In North Africa intense nationalism has created difficulties between the United States and local governments over base rights. This country has agreed to relinquish its bases in Morocco.

Assuming that that particular area that you have referred to in your statement should go along the same lines that prevail in France, for example, what effect would that have on Navy's mission requirements? I am speaking now, of course, from the policy level because that is where the assignments are made, the war plans are created, and so forth. Does that have a tendency to increase Navy's operational requirements or lessen them?

Admiral BURKE. As overseas bases are lost, for whatever reason, the Navy's responsibilities usually increase. They do increase because our forces cannot operate from foreign countries.

Mr. SHEPPARD. In other words, insofar as the future is concerned, and your ability to project your thinking into the future, you are presently confronted with a very definite possibility of restrictive operational rights within those countries, are you not?

Admiral BURKE. Yes; it increases.

Mr. SHEPPARD. So to the degree that is lessened you obviously escalate the functional requirements of the Navy. They intensify, do they not?

Admiral BURKE. That is correct.

FORMULATION OF NAVY BUDGET

Mr. SHEPPARD. Let me say to my friend, Secretary Franke, that I would like to have the following information. You have it expressed in your statement, but I want to coordinate it. What was the amount that Navy itself, after screening its own budget, went to the Department of Defense with? What was the actual figure?

Secretary FRANKE. $12.270 billion for new obligational authority.

Mr. SHEPPARD. What was the figure carried from the Department of Defense? What was their decision as to the $12.270 billion?

Secretary FRANKE. $12.013 billion, which after the application of $60 million in transfers from stock funds actually adds up to the figure of $12.073 billion for comparative purposes.

Mr. SHEPPARD. What was the figure that the Department of Defense carried to the Bureau of the Budget? Is that the figure that they carried?

Secretary FRANKE. Yes.

Mr. SHEPPARD. And what was the figure that came out of the Bureau of the Budget?

Secretary FRANKE. The same figure.

Mr. SHEPPARD. In other words, you had the concurrence of the Bureau of the Budget in the amount resolved in the Department of Defense?

Secretary FRANKE. That is correct.

Mr. SHEPPARD. When you received that final determination of $12.073 billion obviously you had to cut the pattern within the Navy to fit the allocation of funds, did you not?

Secretary FRANKE. We knew of this in advance because the individual items making up the Navy's request were thoroughly discussed at great length with the Secretary of Defense. At all times we knew what areas were considered questionable by the Secretary of Defense. Eventually when we came down to this final figure given to us by the Secretary of Defense we were thoroughly aware of what the individual items were.

Mr. SHEPPARD. If you take your mathematics that you have presented here to me, your $12.270 billion and your ultimate $12.073 billion, it is quite indicative to me you had foreknowledge of a limitation before you submitted this request to the Department of Defense. Is that reasonable assumption on my part?

Secretary FRANKE. No, sir. We were given a figure to go down with for planning purposes and there never was any intention on the part of the Secretary of Defense that this would be the final figure that the Navy would come out with. This was not a predetermined figure. In this vast complex of determination of the budget any amounts that might be submitted by any service that were soft in nature would be put in a common pot and made available for the service with the best requirements. There never was a disposition on the part of the Secretary of Defense to say, "This is the final figure you get."

Mr. SHEPPARD. I grant you that, but nevertheless the closeness of the figures is very interesting to note.

Secretary FRANKE. What happened in effect was when we went down with the larger figure we came out with $200 million less.

Mr. SHEPPARD. I just had handed to me this morning the breakdown of the budget. I have not had a chance to analyze it. Have you looked it over?

Secretary FRANKE. Yes.

Mr. SHEPPARD. What particular difference will this estimate have, as presented here for the Navy, as compared to your original concept?

Secretary FRANKE. The original concept of the officers and bureaus of the Navy was a $19 billion figure. I think that you have, Mr. Chairman, a list of the items that made up this difference. As I

explained yesterday, the whole purpose of this exercise is to enable the Secretary of Defense and the Chief of Naval Operations to know what the bureaus and officers of the Navy think of as Navy requirements. This does not mean we agree with these requirements at all. Some of them are important, and some of them are of lesser importance. But we would like to get from the bureaus and officers of the Navy their ideas which put into the picture their imagination, their initiative, and their thinking. That is done every year. There has always been a great difference every year. It is not unusual.

Mr. SHEPPARD. It is not my contention that it is unusual. I did not mean to leave that interpretation in my question. Obviously you would have varied concepts of requirements emanating from the field levels on up. That has been going on over a period of years, and I can see no difference in this year compared to those previous years. Like any other business, you have limitations upon your expenditures that are determined by echelons beyond your control, whether it be the Congress or the Bureau of the Budget.

Secretary FRANKE. That is correct.

Mr. SHEPPARD. That is a fact.

Secretary FRANKE. Yes.

Mr. SHEPPARD. What I am trying to establish here is that it has been apparent from your responses, and perhaps unintentionally, that the program was completely satisfactory. We all agree with it. That is a format of procedure. We all know that. We have lived with it long enough to know that those factors pertain, but that limitation, while we have to live with it, obviously does not mean in all instances it meets the military requirements, or does it?

Secretary FRANKE. I think that it meets the military requirements for the time being. Yes, I think this is a fair budget. I think that it gives a balance in the Navy. I think for this particular year, insofar as it provides for future capability, it is as fair a budget as I have seen. As a matter of fact, I think it is a fairer budget than I have seen in 6 years.

POSSIBLE SUPPLEMENTAL APPROPRIATION REQUESTS

Mr. SHEPPARD. I would not quarrel with you. I think perhaps it is. It has gone through its course of treatment and been very definitely analyzed. It has been made to fit the requirements as these requirements are obtainable under the budget with which you have to deal. There is just no question about that.

Now, is there any possibility, so far as either one of you gentlemen knows at the moment, that due to the potential shifting, or phasing from one operational requirement to another—and I am referring to the missile aspect as against the conventional at the moment—that you may have to come back to the Congress for a supplemental? I am speaking of any field that you might know of at the moment.

Secretary FRANKE. Yes.

Mr. SHEPPARD. What are the fields?

Secretary FRANKE. I think, in particular, the outstanding illustration is if a POLARIS missile is developed, and we are satisfied it is completely operational, we would then recommend to the Secretary of Defense, and I believe Mr. Gates said so in his statement he would also do the same thing, we would then expect to come back to the

Congress with an acceleration of the POLARIS missile and ship program. This is the outstanding area where I think we might come back to the Congress.

Mr. SHEPPARD. Mr. Mahon, may I ask you this question? Are you going to require the Navy and the other military branches to present to you and the committee the priorities by which their requirements are established?

Mr. MAHON. Yes.

Mr. SHEPPARD. As long as my chairman is going to require that, I will not ask for it. I would like very much to have it because I want to see how these priorities are set up within the total requirement established by the military.

I have no further questions.

Mr. MAHON. Mr. Sikes.

BUDGET GUIDELINES

Mr. SIKES. It appears to me this is not a very happy situation. Admiral Burke, you said this: "A Navy of about the present size expressed in terms of men, ships, and aircraft, is needed to do the job facing us."

You also said, "Each year it costs more to operate a slowly shrinking Navy Establishment."

Everything you do is going up in cost. People cost more; materials cost more, operations cost more, and Navy procurement has had to suffer as a result.

I know that you are making economies wherever you can, and I think that is commendable. We want you to make savings, but, it is true, is it not, you were given a budget guideline about the same as your budget the year before, and the year before, plus or minus a few dollars, and told to live within it? Is that about the status of the situation?

Admiral BURKE. We were given guidelines on a basic budget. This basic budget was to be last year's budget less 10 percent of our R.D.T. & E., procurement and military construction funds. We were told to build the best budget we could within this basic amount, and then, as an add-on, were given last year's budget plus $500 million. Each service was given the same guidelines.

Mr. SIKES. You are pretty well tied to the amount of money you had in immediate previous years; is that right?

Admiral BURKE. Well, this year the Secretary of Defense examined all the programs across the board after we made the budget submission. However, the final amount was just about what we got last year.

Mr. SIKES. You were given about the same amount of money you got last year? How much more does it cost to operate this year than it cost to operate last year—5 or 10 percent?

Admiral BURKE. Probably in between. It is probably 7 percent. It is more than 5 percent and probably less than 10 percent.

REDUCTIONS REQUIRED BY FISCAL YEAR 1961 BUDGET

Mr. SIKES. So, except for the economies that you are able to make—and you should make them wherever you can—you are going to have to shrink your naval establishment around 7 or 8 percent this year to live within the budget that you are allotted; is that about right?

Admiral BURKE. Yes; that is about right.

Mr. SIKES. How many years can you shrink your Naval Establishment 7 or 8 percent and still stay in business and do the job that is expected of you?

Admiral BURKE. We cannot do that very long, sir, of course. As the Secretary pointed out, each year it is getting much harder to resolve the conflict of immediate readiness versus future capability. We have reduced our forces; reduced our manpower, and at the same time have not gone up very much in the production of new equipment.

Mr. SIKES. Now, you are projecting a cutback in the number of planes. Is that because the state of the art of defense is such that you no longer need those planes that you are eliminating, or is it because under the budget you must live you cannot afford them?

Admiral BURKE. A little bit of both.

Mr. SIKES. Some of both. Missiles are coming in, but not coming in as fast as you are having to cut back on planes; is that right?

Admiral BURKE. That is partially true, but also the missiles will not do all the things that planes are required to do. Missiles will not completely replace planes.

SHIPS CANCELED

Mr. SIKES. You canceled some ships that were in the 1960 program, and you turned right around and put those ships back into your 1961 program. That does not appear to be very good business. Is it purely a budgetary consideration that causes you to do that?

Admiral BURKE. It is purely a budgetary consideration and it is not very good business. That is why the Secretary of Defense and the Navy have submitted a new method of ship costing.

Mr. SIKES. Are you not allowed to come back to Congress and ask for a supplemental appropriation in order to get the ships started which were authorized and funded last year?

Admiral BURKE. Yes. That is what we have done largely heretofore, ask Congress for an increase in funds to complete the ships. Costs went up so much that we had to cancel some ships in order to complete others.

DELAY DUE TO EXPENDITURE LIMITATIONS

Mr. SIKES. You state on page 8:

> The plan called for deferring the award of new programs in both 1960 and 1961 to the last quarter of each fiscal year and for stretching outgoing programs in fiscal year 1960.

The Navy has been doing that for a couple or more years. You simply put off all the expenditures you can until the last quarter of the fiscal year. Again, that looks like poor business.

If Congress appropriates money for the Navy and if we commit ourselves to a program which you have convinced us you need and that the Nation needs, should you not be allowed to spend this money equitably through the fiscal year, and thus get your programs under way rather than having to wait until the last quarter to start that program?

Admiral BURKE. There are several limitations on any financial program. We submit our financial plan to the Secretary of Defense. After review, his financial plan is then issued by the Secretary of Defense, and in this plan we have limitations on the amount of money we can obligate per quarter, and expenditure targets each quarter, in addition to annual limitations on obligations and expenditures. We must stay within the Secretary of Defense's financial plan.

Mr. SIKES. The net effect of that plan, as I interpret it, is to make the budget structure look a little better by deferring expenditures, but it also postpones by a few months or a few quarters the effective defense of the country that the Congress has funded and authorized as being needed.

Admiral BURKE. The Bureau of the Budget and the Office of the Secretary of Defense must know where their money is going. This is done in order that there will not be any open-ended programs. They keep very close tab on it.

Mr. SIKES. I am sure you do not mean these things have to be postponed to the last quarter in the fiscal year in order that the Bureau of the Budget and the administration can know where the money is going.

Admiral BURKE. We have to do that in order to stay within our expenditure limitations, sir.

Secretary FRANKE. May I add a comment?

Mr. SIKES. Yes, indeed.

Secretary FRANKE. When we find we are really in a serious situation, and this has happened in other years, our alternative is to go to the Secretary of Defense and say, "We cannot live within this kind of an expenditure target."

Mr. SIKES. Do you ever do that?

Secretary FRANKE. Yes; we have done that.

Mr. SIKES. Have you been allowed to use appropriations earlier by doing so?

Secretary FRANKE. Yes; and we have been allowed an increase in the total expenditure target, and we have overrun as much as $100 million or $200 million a year over the original estimate of expenditures. We are not without recourse.

EXCLUSION OF JET TRAINING AIRCRAFT FROM PROGRAM

Mr. SIKES. Admiral Burke, you said in your statement that "No administrative or training types of aircraft whatever have been included in this budget."

In prior years the Navy has planned to go to jet basic trainers, is that not so?

Admiral BURKE. Yes.

Mr. SIKES. Apparently you have given up that concept and you are going to continue to use propeller craft for basic training?

Admiral BURKE. Yes.

Mr. SIKES. Is that a budget limitation or is it a decision that to train pilots most effectively you should actually begin their training in prop planes, or is it both?

Admiral BURKE. It is both, sir.

Mr. SIKES. It looks as if in this modern age you are going backwards. You say the Navy is going into all jet trainers. In this

budget 2 years after you have adopted this concept you say, "No; we are going to stay in prop trainers, we are not going to acquire new jet trainers for basic training. Will you explain this situation?

Admiral BURKE. We have some jet trainers, of course. Within the funds that are made available to us we need other things more than jet trainers. We prefer to put the money that we have into combat aircraft. We can do all right with our training. It is true that we would like to have new trainers, but we can do all right with what we have.

Mr. SIKES. Surely you felt that you could do better with jet basic trainers or you would not have scheduled their use initially. Did the change in your plan come about as the result of a limitation of funds?

Admiral BURKE. Yes.

REDUCTION IN OPERATING AIRCRAFT

Mr. SIKES. You say that your procurement of combat planes for this year in numbers will not replace annual accident and wearout losses. You cannot do that many years and continue to operate, can you?

Admiral BURKE. You come down to a lower level of operating aircraft.

Mr. SIKES. For how many years do you foresee the Navy will have to reduce the number of its operating aircraft?

Admiral BURKE. That depends upon how much money we get in future years, sir. Also, it depends on whether or not costs continue to go up.

Mr. SIKES. Does the Navy foresee a level off period at which time it appears that regardless of missile development and other new weapons development you will need a certain number of combat aircraft?

Admiral BURKE. Yes.

Mr. SIKES. How many years do you foresee it will be before you reach that level, or can you project your thinking that far into the future?

Admiral BURKE. With the aircraft we have coming on the line as a result of this budget, which will come out in 1963, we will just about reach that state, sir. Now, I would like to point out that our aircraft accident rate is gradually being reduced. Our wearout losses of course, will probably continue at about the same rate.

REDUCTION IN NUMBER OF SHORE ESTABLISHMENTS

Mr. SIKES. You have been talking about reducing the number of shore establishments. Are you satisfied, and is the Navy satisfied that you are not building establishments which when completed will not be needed; or that comparable establishments will not be needed?

Admiral BURKE. We can never guarantee that, sir. We are doing our very best to prevent just that. The establishments that we have in this budget, for example, are ones that we are as sure as we possibly can be we are going to use for a long, long time. These include POLARIS missile overhaul facilities and similar installations. Sometimes our plans do get changed, but we have a committee that is established primarily for the purpose of determining the necessity of construction of facilities.

TYPES OF AIRCRAFT ELIMINATED FROM PROCUREMENT PROGRAMS

Mr. SIKES. Sometimes we up here are not sure that board is working very well.

You say, Admiral, this year we are buying 12 types of aircraft, last year it was 16 and the year before 20. Provide for the record a description of the types that are being eliminated from the procurement inventory.

(The list follows:)

NAVY AIRCRAFT ELIMINATED FROM PROCUREMENT, FISCAL YEAR 1959 TO FISCAL YEAR 1960

A3D–2: Long-range, high-performance, land- or carrier-based heavy attack aircraft.
P5M–2: Twin-engine long-range seaplane.
C–130BL: Ski-equipped transport aircraft to support "deep freeze."
VU–(Admin): Light twin-engine propeller logistics aircraft.

NAVY AIRCRAFT ELIMINATED FROM PROCUREMENT, FISCAL YEAR 1960 TO FISCAL YEAR 1961

HSS–1N: Ship-based ASW helicopter.
P2V–7: Land-based patrol aircraft.
WF–2: Carrier-based twin-engine AEW aircraft.
T2J–1: Two-place basic jet trainer.

POLARIS PROGRAM

Mr. Sikes. Now, you gave us a very good presentation on the carrier I thought Captain Nehle did a splendid job in showing the place of the carrier and the work that it must do in the modern Navy.

I would like to see a similar presentation on the POLARIS submarine.

Admiral BURKE. We have one available if the committee wants it.

Mr. SIKES. I hear that we will receive the complete story on POLARIS, so we will not go further into it at this time. But you are satisfied with the progress of POLARIS? Is it on schedule?

Admiral BURKE. POLARIS is on schedule, sir, about a week ahead, but it is essentially on schedule.

FIRING OF EMPLOYEES TO PROVIDE PAY RAISES TO OTHERS

Mr. SIKES. Very good.

I have not been happy with Navy's policy on implementing wage increases when the wage boards grant an increase. This is mandatory under the law and presumably the Navy would seek a supplemental appropriation from the Congress, when these increases are granted. This is what I think you should do. Instead you take it out of the hides of the workers by requiring enough of them to be discharged to permit the others to get a wage raise. That just does not look like proper procedure to me. If you have more employees than you need you should get rid of them, but for X number to be fired in order for the others to get a salary raise does not look to me like the right thing. Why do your people do that? You know wage increases are mandatory under the law and Congress is obligated to give you additional money.

Secretary FRANKE. I do not like it, either. This comes up at various times during the year. It can happen when Congress is not in session.

Mr. SIKES. We are not away from Washington long nowadays.

Secretary FRANKE. You certainly make a point. This has disturbed me and I do not like it. It seems unfair when you have a wage increase that——

Mr. SIKES. It is unfair.

Secretary FRANKE (continuing). That you have to fire people in order to take care of it. It really comes down to a question of a constant review of activities and how many people you need. Sometimes I think this is good because it forces us to take a better look at the number of people we require in our activities. It is not always bad.

Mr. SIKES. If you have more people than you need, you should get rid of them, but let us not make it policy that you have to get rid of some workers for the rest of them to have a mandatory wage increase.

Secretary FRANKE. You are certainly right.

Mr. SIKES. Whose policy is that, the Secretary of Defense, the administration, or whose?

Secretary FRANKE. I think that it is an old policy, the fact that you do not put in your budget in the first place the amount for anticipated wage increases. That is the way it starts. How it reached the present point I do not know. I do not recall we have ever come to Congress with a supplemental request for this kind of money.

Mr. SIKES. Not in recent years. I think that policy should be rewritten. It does not look like a good one. Do you agree with that?

Secretary FRANKE. Yes. I think the Congress does at times look a little askance at supplemental requests.

Mr. SIKES. We may not like them but we get many of them.

Secretary FRANKE. You can get into a situation where you can get all kinds of reasons for a supplemental request.

Mr. SIKES. This one appears to be on a different plane.

Secretary FRANKE. It seems so to me.

Mr. FORD. Will the gentleman yield? This is a little different situation, but it is my recollection that several times when we approved pay increases for civilian employees, not blue-collar, we have directed in the legis'ation that the added funds required be absorbed. My point is sometimes we are guilty on forcing that.

Mr. SIKES. This is a policy that has been in effect for a number of years.

Mr. WHITTEN. I can appreciate the point my colleague makes, however, having dealt in this field of civil service, having worked with it, having taken the challenge and written a rider some years ago, it is my observation that if you do not do it this way, it is doubtful you will ever reduce the total number of employees. That has been my experience.

MARINE LANDING TEAMS AND LANDING EQUIPMENT

Mr. SIKES. Let us talk about landing teams and landing equipment. One of the basic requirements of modern warfare is the ability to make landings under conditions of nuclear warfare. It is an ex-

tremely complicated subject and an extremely difficult operation in which to achieve success. How many Marine landing teams do we have now and how many will we have under the new budget?

General SHOUP. Twenty-one now, and we intend to reactivate a minimum of two for sure in this fiscal year because, as I explained yesterday, the increased number of personnel that will be available to us, principally because of the effect and dividends received from the 4-year enlistment program, will make this possible.

Mr. SIKES. Are you going to have as many landing teams as you need or as many as you can have under the budget and with the number of personnel available?

General SHOUP. This is the result of last year's determination to take a vertical cut in landing teams.

Mr. SIKES. That is not my question. Is this number of 23, which you project, the number you feel is required for today's defense job or is it the largest number you can have under the budget and manpower limitations under which you operate?

General SHOUP. It is the number we will be able to have under the manpower limitation.

Mr. SIKES. How many do you think are needed for the job that the Marines must anticipate worldwide at this time?

General SHOUP. I think probably it should constitute 27 infantry battalions around which we build our landing teams.

MODERNIZATION OF MARINE CORPS EQUIPMENT

Mr. SIKES. Are they fully equipped with modern equipment or is a considerable part of it World War II modernized?

General SHOUP. For example, we are in the business of getting into the 7.62-mm. family of weapons for the individual Marine. We are still with the M–1.

Mr. SIKES. How many years will it take to equip the Marines with 7.62 rifles?

General SHOUP. It is a 4-year program. This year we are giving our units on the east coast these rifles.

Mr. SIKES. Do you know of any first-class army or marine corps or equivalent elsewhere in the world that is as slow as we are in equipping its forces with modern post-World War II rifles?

General SHOUP. I do not.

Mr. SIKES. There are no others. I wish you would show this committee the comparative status of the Marine Corps insofar as new modern equipment is concerned. I am speaking of tanks, missiles, missile launchers, equipment of that general nature. I want to know how much we have, how many years it will take to equip the Marine Corps, including the Reserves.

(The information to be supplied follows:)

MODERNIZATION

In answering this question, we have selected significant items for our program. A general discussion for each classification of equipment is included.

Column 1 provides information on the percent of the procurement objective for each item funded through fiscal year 1961.

Column 2 states the estimated number of years until the procurement objective may be reached for these modern items.

Column 3 is the estimated cost after fiscal year 1961 to achieve the procurement objective.

1. The 7.62 modernization program, which was initiated with fiscal year 1960 funds, will be completed with fiscal year 1963 funds. This program is planned to completely equip all forces with the new weapons by the end of fiscal year 1964.

2. It is planned to procure the light anti-tank weapon (XM72) as a replacement for the present anti-tank rifle grenade to give more range and armor penetration capability. Procurement is planned over a 5-year period commencing with fiscal year 1962, and will be sufficient to equip Active Forces.

2. It is planned to procure an antitank guided missile to fit in the Marine Corps weapons system for antitank defense. Procurement will be made over a 5-year period commencing in fiscal year 1962.

1. Communication and electronics equipment in operational use cannot contain the most recent design techniques, some of which could provide substantial improvements in performance and capability. This is because of the rapid advances in technology in this field. Therefore, modernization in this field can never be considered complete. It is imperative that we continually improve our communication and electronics capability to meet the needs of modern warfare.

It is significant to note that every item requested in fiscal year 1961 for communication/electronics is for the initial procurement of modern items to partially equip (48 percent) the Active Forces, including Active Reserve units. Complete modernization, with these items including our mobilization objective, is planned by fiscal year 1965.

Equipment currently in our development program, but not scheduled for completion in fiscal year 1961, is planned to be delivered in our total quantity requirements by fiscal year 1969. Projected costs for fiscal year 1962 through fiscal year 1968 indicate a total requirement of approximately $600 million.

Motor transport equipment	Percent (1)	Time (2)	Dollars (3)
		Years	
Carrier ½-ton, M-274	65.3 percent/2,570	3	3,600,000
Truck ¼-ton lightweight, M-422	62.5 percent/1,997	1	4,400,000
Truck, ¾-ton, convertible	None/949	3	8,500,000

1. Carrier, ½-ton, M274: Funding through fiscal year 1960 will provide 90 percent of peacetime requirements based on a moderate allowance of 451 vehicles per Marine division. This mechanical mule is a light simple burden carrier utilized to take the load off the infantryman's back so that foot troops can achieve a minimum acceptable degree of cross-country mobility essential for effective combat on the modern battlefield.

2. Truck, ¼-ton, lightweight, M422: The Mighty-Mite is a 1,750-pound jeep-type vehicle which is 900 pounds lighter than the standard M38A1 and 500 pounds lighter than the new Army M151. These weight differences become of vital importance in the vertical assault. Our primary helicopter for the vertical assault now and in the immediate future is the HUS. The HUS can transport all three types of ¼-ton trucks, but since the helicopter is extremely sensitive to atmospheric conditions, the Mighty-Mite is the only one which we can be reasonably certain of getting ashore now in the vertical assault under most operational weather conditions, and will give an increase in helicopter range when carrying these vehicles.

The Mighty-Mite is a thoroughly tested vehicle which is now ready for production. Deliveries from a limited production run of 250 vehicles commence in February 1960 and will be completed in April 1960. These 250 vehicles will be utilized to run accelerated troop tests to determine minimum operational requirements. Operational suitability tests were conducted on preproduction pilot models.

The minimum quantity of ¼-ton trucks required for vertical assault operations has been calculated to be 415 per Marine division. This does not include vehicles that could be adapted for use as communication vehicles, ambulances, and mounts for light weapons such as the 106 mm. RR AT gun and the Davy Crockett. When the forthcoming troop tests are completed, the Fleet Marine Force commanders will submit recommended operational requirements which will be utilized to derive and establish firm allowances. The procurement program will then be adjusted as necessary.

3. Truck, ¾-ton, convertible, XM443: This versatile platform vehicle is currently under test by the Marine Corps. It shows much promise. Test results to date indicate that the major components of this vehicle will probably be adequate for use on a 1½-ton version. The Marine Corps plans on testing such a version in the immediate future. If these tests are satisfactory, a two-vehicle family consisting of a ¾-ton truck and a 1½-ton truck utilizing the same basic major components should lend itself for use in the vertical assault.

1. Sectionalized engineer equipment: It is our objective to provide the pioneer battalions of the Marine division basic engineer construction equipment which can be air transported as a complete unit or if necessary can be readily sectionalized into components that can be helicopter transported. Items being procured are commercial type equipment that has been modified to allow sectionalization into component assemblies weighing less than 6,000 pounds. Minimum quantities of the following equipment will be procured to meet this requirement: tractor, rubber tired with front end bucket loader; crane, self-propelled, 6,000-pound capacity; tractor, rubber tired with bulldozer; scraper, 7.5-cubic-yard capacity; grader, self-propelled, diesel engine driven; tractor, crawler, light.

2. Modification of mat, landing, aluminum M–9: Current stocks of M–9 landing mat which was procured prior to and after World War II can no longer be used with tactical jet aircraft. In order to make this matting suitable, it has been necessary to modify present stocks of M–9. This modification consists of riveting a plate on the top of the M–9 and improving the end connections. This modified mat is referred to as M–9–M–1, and this matting will be used for taxiways, warmup areas, and handstands. A similar modification is made to the M–9 mat in that plates are welded to the top and bottom of the mat. This matting is referred to as the M–9–M–2, and it will be used for construction of the runway. This modified matting will be used with the catapult and arresting gear being provided by BUWEPS and will enhance the capability of establishing small airfield tactical support (SATS) airfields for high performance jet aircraft ashore, and permit subsequent close support air operations within the beachhead and from fields that are now marginal.

3. Materials handling equipment: Present commercial type forklifts being used by Fleet Marine Force units are unsuitable for over-the-beach operations, and handling supplies in the forward dump areas. Rough terrain forklifts which are being procured to replace these commercial forklifts are:

(*a*) A 3,000-pound-capacity rough terrain forklift that weighs 3,000 pounds. This forklift will be capable of negotiating rough terrain and can be lifted by a HUS helicopter.

(*b*) A 6,000-pound-capacity rough terrain forklift which will be used in over-the-beach operations and forward dump areas.

(*c*) A 10,000- to 15,000-pound-capacity rough terrain forklift to handle the heavier supplies and equipment that are brought in resupply shipments.

(An additional classified statement will be furnished the committee.)

LITTLE JOHN AND LACROSSE ROCKETS

Mr. SIKES. I want to ask you something about the Marines decision not to use the LITTLE JOHN rocket and the LACROSSE rocket. The Army has been telling us they are good weapons. Marines say they do not meet requirements, that you are going to have to look elsewhere. Why?

General SHOUP. Specifically speaking to the LACROSSE, my information is there are some technical difficulties ———. In addition, we feel that all of our weapons of this type that have the possibility for nuclear warheads in addition must be able to project their shell very accurately with a conventional type weapon.

Mr. SIKES. You would not use LACROSSE for conventional type weapon, would you?

General SHOUP. We plan to use the HONEST JOHN.

Mr. SIKES. I understand.

General SHOUP. We feel it should have that capability.

Mr. SIKES. The LACROSSE problem apparently is one of guidance or electronics. When did that weakness appear? We spent a lot of money developing this thing and thought it was pretty good.

General SHOUP. I believe in September 1959 the Commandant advised the Army that the Marine Corps participation in the LACROSSE program was terminated.

Mr. SIKES. How long have you been testing LACROSSE?

General SHOUP. I cannot answer that.

Mr. SIKES. Please put in the record at this time a summary of the tests or other events which led to a cancellation of the Marine participation in the LACROSSE program.

General SHOUP. Yes, sir.

Mr. SIKES. Will you do the same thing for LITTLE JOHN?

General SHOUP. Yes.

(Classified statements were furnished the committee.)

COBRA ANTITANK MISSILE

Mr. SIKES. What are the characteristics of this new weapon COBRA, which you plan to buy?

General SHOUP. That is an antitank missile. I have some written information here.

Mr. SIKES. All right.

General SHOUP. COBRA is a West German-developed wire-guided antitank missile.

Mr. SIKES. Almost exclusively antitank?

General SHOUP. Antimechanized, antivehicular.

Mr. SIKES. Operated by one or two men?

General SHOUP. A single man can use it. It is lighter, more mobile, and less complex in its operation and maintenance than any other system the Marine Corps has tested. We plan to commence some service tests of the system at Camp Pendleton in February or March of this year if we obtain the item. The Army has been invited to participate in this and is so doing.

Mr. SIKES. I would like a complete statement for the record on this weapon and the reasons for it. Are we paying a royalty for the use of this weapon?

What are the French weapons we are testing for our own use?

General NICKERSON. The SS–10 and SS–11 are the French weapons.

Mr. SIKES. What are they?

General NICKERSON. A similar antitank guided missile.

Mr. SIKES. Are they for use other than for antitank weapons?

General NICKERSON. They can be used against concrete emplacements, pillboxes, and the like.

Mr. SIKES. Do they accomplish about the same purpose the COBRA accomplishes?

General NICKERSON. Generally, yes, sir.

Mr. SIKES. Does the COBRA appear to be superior or are all three of them under test?

General NICKERSON. All are under test.

Mr. SIKES. The latter two are being procured through the French?

General NICKERSON. Yes, sir.

Mr. SIKES. Are you paying royalties either to the French or to the West Germans for the use of these weapons?

General SHOUP. I do not know the contract detail.

Mr. SIKES. Will you also provide that for the record?

General SHOUP. Yes, sir.

Mr. SIKES. We have provided a great deal for them. I would like to know whether they are reciprocating.

(The information to be supplied follows:)

COBRA PROGRAM

1. There have been three other similar weapons under consideration by the Marine Corps to satisfy its antitank weapons requirements. These are the French SS–10, the SS–11, and the U.S. Army DART. The DART project was canceled. The SS–10 and SS–11 did not fulfill Marine Corps performance requirements.

2. COBRA is a West German-developed, wire-guided antitank missile. It is lighter, more mobile, and less complex in its operation and maintenance than other similar systems the Marine Corps has tested. Claimed capable of knocking out any tank, the COBRA boasts a high kill probability at ranges of 500 to 1,760 yards. It weighs 20 pounds, including 5½-pound warhead. It is 30 inches long, uses solid rocket fuel and goes 190 m.p.h. It is wire-guided. Other features:

(*a*) Needs no special launcher. A built-in booster charge pops it into the air at a 20-degree angle with jerk of the "lanyard."

(*b*) Lightweight. One man can carry two COBRAS easily on a packboard.

(*c*) Equipped with individual firing cables 100 yards long permitting wide separation of gunner and missile.

(*d*) Eight missiles can be fired in sequence from a single 4½-pound electronic control box.

(*e*) Rudder controlled. By manipulating stick on control box, the gunner guides the missile visually to target. Signals are sent along a fine wire which spins out behind the missile in flight.

3. Early in 1959 Daystrom, Inc., who have the rights to sell the COBRA missile in this country, presented a briefing on the weapon to members of HQMC. A proposal was made to provide 100 missiles and associated equipment to the Marine Corps for test at a cost of approximately $50,000. A contract was made with Daystrom for delivery of the missiles in early 1960 (enclosure (1)). There are no royalty provisions in the contract.

4. The Marine Corps plans to commence service tests of the system at Camp Pendleton in February or March of this year. The U.S. Army has been invited to participate in these tests and is so doing. Dependent upon the outcome of the tests and other factors, the Marine Corps will determine whether or not service procurement for combat use will be instituted.

TERMS OF COBRA CONTRACT

Weapons system No. 180 consisting of:

	Units	Unit price	Amount
1. Guidance control unit	2	$1,470	$2,940
2. Training simulator	1	8,400	8,400
3.1. AT missile No. 810 with inert training head	40	635	25,400
3.2. AT missile No. 810 with inert training head	40	[1]	[1]
4.1. AT missile No. 810 with explosive warhead	10	690	6,900
4.2. AT missile No. 810 with explosive warhead	10	[2]	[2]
5. Engineer technical professional service to instruct USMC personnel in use of system	[3] 60	4,500	4,500
6. Junction box with cable reel in container	1	310	310
7. Field checkout set and battery charger	1	875	875

[1] Cost included in item 3.1.
[2] Cost included in item 4.1.
[3] Man-days.

Inspection and acceptance to be at destination.

DELIVERY

Items 1, 2, 3, 4.2, 6, 7 to CO, Traffic Branch, Base Material Battalion, Marine Corps Base, Camp Pendleton, Calif.
Item 4.1 to Ballistic Research Laboratory, Aberdeen Proving Ground.
Item 5 to be furnished at items 1, 2, 3, 4.2, 6, and 7 destination.
"Buy American Act exception" is stipulated.

EAGLE/MISSILEER

Mr. SIKES. What is the EAGLE/MISSILEER?

Admiral BURKE. The EAGLE/MISSILEER is a combination of missile and aircraft. Instead of putting the performance in the aircraft we are putting the performance in the missile. It is a subsonic aircraft that can stay on station for a long time with a very high performance radar and a very high performance missile. It gives you a cheaper combination than putting high performance in an aircraft instead of the missile.

Mr. SIKES. How does it operate?

Admiral BURKE. Air-to-air. You have the EAGLE missiles attached to the wing of a subsonic aircraft that can stay on station for a long time; the aircraft has a very good radar in it.

Mr. SIKES. Do you have to design an aircraft for it or can you use aircraft already in inventory?

Admiral BURKE. We are trying to take the aircraft that are in inventory and check them out, but so far we have not been able to find an aircraft that is suitable but we are still trying to do that, sir.

Mr. SIKES. What is there about this which is different from other air-to-air weapons?

Admiral BURKE. This system combines a long-range high performance missile with a long-range aircraft. The concept is different because of the slow aircraft and long range, high performance.

Mr. SIKES. What would you use it against?

Admiral BURKE. Enemy aircraft.

Mr. SIKES. That is all, Mr. Chairman.

Mr. MAHON. Mr. Whitten.

DEFENSE SPENDING AND INFLATION

Mr. WHITTEN. Mr. Secretary, I listened with a great deal of interest to the statements here with regard to the differences in the amount of money the President has submitted in his request to the Congress and that which the Navy has said it would like to have. Did I understand you, Admiral Burke, to say your inflationary costs averaged about 7 percent per year? In other words, your costs are going up something like 7 percent each year?

Admiral BURKE. Roughly, yes, sir.

Mr. WHITTEN. One of the disturbing things with me—I voiced it here repeatedly, I do not think very effectively, but repeatedly—has been the intermixing of the domestic economy in every district and State of the Union with defense spending. Last week I asked that we include in our hearings the names of retired military people who are with defense industry. The list fills 18 pages. Defense industry in turn supplies many of the top civilians in the military or defense setup. By the time we get local communities mixed in with temporary dependence upon military spending, it makes it pretty hard to

get an objective view on what is military need and what is domestic desire insofar as pressing for spending.

If we should continue as a nation to depreciate our money at the rate of 7 percent per year, in about 20 years our money would not buy anything, would it?

Admiral BURKE. It is logarithmic.

Mr. WHITTEN. Thirteen and a fraction times seven, on a straight line, 20 or 25 years perhaps actually. With a 7-percent inflation, do you not think President Eisenhower, as Commander in Chief, with the responsibility of reporting to Congress and to the Nation, ought to take that into consideration in determining how much money he feels we should appropriate to the Defense Department?

Admiral BURKE. Yes, sir; and I am sure he does.

Mr. WHITTEN. Do you not recognize the Bureau of the Budget is in effect, President Eisenhower, who is Commander in Chief of the country?

Admiral BURKE. Yes, sir.

Mr. WHITTEN. You have stated that in the budget the Navy wanted about a 60-percent increase. If the Congress in its lack of wisdom, in my personal opinion, were to give the Navy what it wants, 60 percent more, and if it wanted to do the same for foreign aid—that is part of defense, they say—60 percent more, also 60 percent more for the Air Force, and the same for the Army, there would not be anything left to run the country. You would not be for that kind of a situation, would you?

Admiral BURKE. No, sir; and that is why the President has the responsibility for setting our budget. That is why we support the President's budget, because his responsibility is greater.

Mr. WHITTEN. He is looking at the whole picture.

Admiral BURKE. That is correct.

Mr. WHITTEN. You do not mean in testifying to what the Navy would like to have, you do not mean in any way to have the Congress accept your views against the overall judge whose responsibility it is, do you?

Admiral BURKE. The Congress is the judge, sir.

Mr. WHITTEN. Not necessarily. The President and the executive department do not have to spend it if we appropriate it under our division of responsibility—executive, judicial, and legislative. In your part of the executive do you mean for us to follow you instead of the Commander in Chief whose responsibility it is to look over all this situation and determine what we can afford? I want to know.

Admiral BURKE. If you were to accept the President's budget as it is submitted, we would not have to testify on it, sir. We would not be here.

Mr. WHITTEN. A whole lot of this testimony this morning, as happens every year, has not been on what is before us, but it is what you all want that is not in here. That is what the hearing is about this morning. Are you asking us to accept your personal desire to have for the Navy what you want it to have, to accept you in that field as against the recommendation of the President, who has taken into consideration that things are going up 7 percent a year?

Admiral BURKE. Of course not, sir. We support the President's budget.

Mr. WHITTEN. You are not asking us to do that?

Admiral BURKE. We are not asking you to——

Mr. WHITTEN. Do you not think we would be rather shortsighted if, after you said that, we followed you instead of listening to the President?

Secretary FRANKE. May I answer it?

Mr. WHITTEN. I do not know whether you know how Admiral Burke feels about it, but if you want to say something, I will be glad to hear from you, Mr. Secretary.

Secretary FRANKE. The reason I put $19 billion in my statement is because every year this committee asks me what the bureaus and offices of the Navy thought they should have. This does not mean that Admiral Burke or General Shoup and I agree with this figure. We know there is a limit to the amount which this country can afford.

Mr. WHITTEN. What amount would you say that is?

Secretary FRANKE. I think, coming back to what I said before, that the Navy budget this year is a fair budget for the Navy.

Mr. WHITTEN. In case somebody forgot to ask you about this $19 billion, you took care of it and put it in your statement first so we could not forget.

Secretary FRANKE. No, sir, I am sorry; I did not put it in for that reason. I was trying to——

Mr. WHITTEN. If we had forgotten, this way it does not cause any trouble, it is in there.

Secretary FRANKE. If I had thought you were not going to ask it, I would never have put it in.

BASIS OF $19 BILLION ESTIMATE

Mr. WHITTEN. I was not going to ask it, but I suspect it would have been asked.

Where did you get this $19 billion figure?

Secretary FRANKE. I got it by asking all the budget authorities, responsible authorities, within the Navy to state what they would like to have if there were no limitation on money.

Mr. WHITTEN. That is the key to it. That is what everybody would like to have. I do not say this to be critical, though I question your description, "responsible budget authorities" in the Navy. I will say this to Admiral Burke. In all your experience in all the Navy hearings you have been in, you have never known a time when you got everything that you wanted, have you?

Admiral BURKE. No, sir.

Mr. WHITTEN. If the Congress should feel that it could go along with everything you want and everything these services wanted, we would have to cut out just about every other activity of government judged on a 60-percent increase across the board, which is the difference between your figures and these. You folks did not determine what you would suggest the Congress eliminate in the domestic field in order to give you this. You have not carried it that far?

Admiral BURKE. We are not experts on that, sir.

Mr. WHITTEN. We are not, either, but I wondered if you have opinions.

Admiral BURKE. I have opinions, but I would rather not express them.

Mr. WHITTEN. You do not want to get into that?

Admiral BURKE. No, sir.

EFFECT OF VASTLY INCREASED BUDGET ON INTERNATIONAL TENSIONS

Mr. WHITTEN. Here is the next question. The Vice President went to Russia, and there were waves of publicity about it. Our President is just back from a trip to Europe. There is at least talk about perhaps improving this relationship—I said talk. At least, there is a lot of feeling in this country that the President as Commander in Chief—I happen to be a Democrat and I am not trying to give him a buildup—he is our leader, that he is trying to ease these tensions. He has had Mr. Khrushchev over here.

If the Congress should go along with this figure the Secretary of the Navy submitted that you would like to have—$19 billion instead of $12 billion—if we did that and added 60 percent to our military budget right now under these conditions, do you think it would strengthen Mr. Eisenhower's hand when he is saying we are trying to work out something? Do you think it would strengthen the United States in trying to work out something if we fell for any such pitch?

Admiral BURKE. It would be better to do that than cut the budget on the expectation that what Mr. Khrushchev is saying is for easing the tension for our benefit rather than for Russia's benefit.

Mr. WHITTEN. You volunteered something there, no one on this side has mentioned "cutting the budget".

Admiral BURKE. Yes, sir; it is not a one-sided question.

Mr. WHITTEN. The Secretary volunteered the fact that the Navy wanted $19 billion, 60 percent more than you had this year. Nobody has talked to you about cutting the budget.

Admiral BURKE. All right.

Mr. WHITTEN. You volunteered that. I did not say that. I said to follow the Commander in Chief in his balancing of inflation, domestic need, the military situation—I am talking about the 60-percent increase over this year that the Navy indicated the various component parts would like to have. Do you think for us to come in now, against the wishes of the President of the United States and give him 60-percent increase in military money that it would help the situation internationally at the moment? Do you think that?

Admiral BURKE. If we got a tremendously increased budget, of course, it would be harmful psychologically.

Mr. WHITTEN. That is the question.

Admiral BURKE. This Nation is in a very crucial stage right now as to what we do with our strength. Mr. Khrushchev is not working for the good of the United States. He is working for the good of Russia.

Mr. WHITTEN. You have no argument with me about that.

Admiral BURKE. What he says, though, on his reductions, if we accept that on face value without a very good check, we may be in trouble.

Mr. WHITTEN. I certainly agree with you a hundred percent about that. If this thing is not immediate and if it is going to last 15 or 20 years, do you not think the President as Commander in Chief and the Director of the Budget and his executive department should give attention to the 7-percent constant inflation, last year, this year? If it keeps up to the point that our economic system is destroyed, do you think we could fight our way out of a paper sack?

Admiral BURKE. I am sure the President gives a great deal of thought on that. He has made a lot of speeches. The Bureau of the Budget thinks about it.

Mr. WHITTEN. I am willing to follow him on this budget. Are you?

Admiral BURKE. Yes, sir; I said I support the President's budget.

Mr. WHITTEN. Then, you are not indirectly by reason of this approach this morning trying to get us to increase by one dime the Navy appropriation?

Admiral BURKE. That is correct. We support the President's budget but, on the other hand, if there are going to be changes in the President's budget, we would like to make certain that the requirements are examined across the board, the requirements of everybody.

Mr. WHITTEN. Including the 60-percent increase your folks wanted and did not get? You want that gone into rather fully, too?

Admiral BURKE. Yes, sir.

Mr. WHITTEN. Why? So we might grant it, though you do not now officially request it.

Secretary FRANKE. May I add one word?

Mr. WHITTEN. Yes, sir.

Secretary FRANKE. I want to clarify what may be a misunderstanding. I did not put the $19 billion into the budget because the Navy was going to ask this committee or the Congress for $7 billion. That was not the purpose of it.

Mr. WHITTEN. I will agree with you.

Secretary FRANKE. I thought you ought to have all the facts as to what goes on in the budget process in the Navy. As I say, I know this committee always asks it. It is entitled to ask it.

Mr. ANDREWS. Will the gentleman yield?

Mr. WHITTEN. Yes.

Mr. ANDREWS. I would like to say I have worked with the Secretary over a period of 6 or 7 years. He is correct. That is one of the first questions our subcommittee used to ask him: What was the overall request made by the Navy Bureaus? We referred to it as the letter to Santa Claus.

Mr. WHITTEN. I said earlier that I doubted I would have asked the question, but I was certain it would have been asked, Mr. Secretary. We can agree on that.

Secretary FRANKE. I just wanted to make sure you know.

Mr. WHITTEN. I am serious in saying this. This Russian situation—I have studied it, as you have, and I do not profess to know, and I do not know anybody here who professes to know, what Mr. Khrushchev will do. I do not claim I do. I worry about it. Since nobody does and since this has been going on a long time and the outlook, according to all of you, is it could last for 20 years more, I think we would be foolish if we did not recognize that we are depreciating our currency 7 percent a year, which in 20 years could make it necessary for us to call a De Gaulle back as has happened in France. France could not fight its way out of a paper sack a few years ago if left on its own without help. Whatever the circumstances, I hate to get off where we are discussing a 60-percent increase from what you had last year, and last year that plus everything else we are doing as a nation resulted in 7-percent inflation. If we went along with a 60-percent increase, with its resulting inflation to give you what you want, we would be endangering our economy. I believe we are paying too little

attention to the economic side of this. Certainly, I, for one, would match my judgment against that of the President in a lot of fields where I think I have more direct contact, but I do not envy him his job trying to balance the domestic demands of Congress and the people and the various military services.

Having that responsibility and seeing all of it, certainly I think it ill becomes a service to in any way left-handedly support his budget—I am not accusing anybody of that—but when most of the talk is on this 60-percent increase Navy desired that is not in the budget, I cannot help but think maybe the discussion is for some purpose, not necessarily to enlighten us. I have seen folks get extra money through that approach in times past.

Certainly it makes it evident that Congress cannot let the military services write their own ticket. I hate to see it under present conditions. From the record here, we would be bankrupt before we started. That is all at the present time, Mr. Chairman. I pass the witness.

Mr. MAHON. Mr. Andrews.

Mr. ANDREWS. Mr. Secretary, you are satisfied with this budget?

Secretary FRANKE. Yes, sir.

Mr. ANDREWS. And you, Admiral?

Admiral BURKE. I support the budget.

Mr. ANDREWS. And you, General?

General SHOUP. Yes, sir.

"NAUTILUS" CORE

Mr. ANDREWS. Each of you would like more of certain things than this budget provides, however. One of your great problems is inflation. I want to ask you a few questions about the new core you put in the *Nautilus*. Has it been completed?

Admiral BURKE. This is the first overhaul. The *Nautilus* is now under overhaul and has not gone to sea since.

Mr. ANDREWS. The first core ran the ship, if I remember correctly, about 65,000 miles.

Admiral BURKE. Yes, sir.

Mr. ANDREWS. It was not worn out at the time you removed it?

Admiral BURKE. It was not completely down; no, sir.

Mr. ANDREWS. Do scientists have any estimation of how many more miles could have been had from the use of that first core?

Admiral BURKE. I can supply that for the record, sir. We removed the core before it was completely down.

Mr. ANDREWS. The core is the fuel, is it not?

Admiral BURKE. Yes, sir.

Mr. ANDREWS. Did you have any cost of operation so far as fuel is concerned over those 65,000 miles other than the cost of the core?

Admiral BURKE. Essentially, no, sir.

Mr. ANDREWS. Has the second core been installed?

Admiral BURKE. Yes, sir; she has gone through two cores, and this is the third core we are putting in.

Mr. ANDREWS. How many miles did she get from the second core?

Admiral BURKE. I would have to supply that for the record, but it is considerably more than the first core.

Mr. ANDREWS. I think it was 125,000 miles or they expected to get that many miles from the second core.

Admiral BURKE. I think you are correct.

Mr. ANDREWS. Please supply for the record the true mileage had from the second core and also the cost of the first core and the cost of the second core.

(The information requested is classified and has been submitted to the committee.)

Mr. ANDREWS. You say she is undergoing overhaul and you expect to put in the third core; supply those figures insofar as the third core is concerned.

(The information requested is classified and will be submitted to the committee.)

Mr. ANDREWS. If you check those figures, you will find that, as you use more cores, the cost per mile of operation will go down.

Admiral BURKE. That is correct; it does, sir.

Mr. ANDREWS. That same thing would prove to be true in a carrier, would it not?

Admiral BURKE. Yes, sir.

Mr. ANDREWS. The more cores you purchased for atomic-powered carriers, the cheaper they would be on a unit basis?

Admiral BURKE. That is correct, sir.

CONVENTIONAL VERSUS NUCLEAR-POWERED CARRIER

Mr. ANDREWS. How much money is in this budget for the conventional-type carrier requested by the budget?

Admiral BURKE. $293 million.

Mr. ANDREWS. You estimate that for another $130 million you could get an atomic powered carrier?

Admiral BURKE. Yes, sir.

Mr. ANDREWS. Do you think that a conventional-powered carrier is obsolete at this time?

Admiral BURKE. No, sir.

Mr. ANDREWS. There are people in the Navy who have such an opinion, are there not?

Admiral BURKE. I do not think so. I cannot speak for very individual. The people who operate carriers realize that as far as aviation features are concerned, the capability to operate from a conventional carrier——

Mr. ANDREWS. I understand that aircraft can land on the deck and take off from the deck of either.

Mr. WEAVER. Will the gentleman yield?

Mr. ANDREWS. Yes.

Mr. WEAVER. I believe Admiral Rickover made the statement to the subcommittee that the conventional carrier is out of date; is that right?

Mr. ANDREWS. I was going to refer to his testimony in answer to Mr. Ford's question. You will recall the testimony last year. Mr. Ford said:

> In other words, you are saying if you add in the supporting costs, this other disadvantage evaporates.
>
> Admiral RICKOVER. Mr. Ford, you know darn well that to buy an obsolete ship is stupid. You know that. I am sure every member of this committee knows that. I do not care what arguments are given to you. What is the purpose of buying a ship? What is the purpose of having any weapon of war that is not the best? Whom are you fooling?

You do not agree that conventional-type carriers are obsolescent the day they hit the water and go into the fleet?

Admiral BURKE. That is correct, sir.

Mr. ANDREWS. If you had our way about it, you would rather have an atomic-powered carrier?

Admiral BURKE. That is correct, too, sir.

Mr. ANDREWS. The life of either of them is about 20 years; is it not?

Admiral BURKE. That is correct; yes, sir.

Mr. ANDREWS. Have you given any study as to what the cost of operation over that 20-year period would be?

Admiral BURKE. Not over the 20-year period because there will be many changes, but we do make studies on the present costs of operation of nuclear-powered ships versus conventionally powered ships.

Mr. ANDREWS. As of now, in the early stages of the game, the atomic-powered ships are more costly to operate?

Admiral BURKE. That is correct, sir.

Mr. ANDREWS. Could not an atomic-powered carrier operate alone, a one-man task force, so to speak?

Admiral BURKE. So can a conventionally powered carrier.

Mr. ANDREWS. They have to have refueling ships.

Admiral BURKE. A nuclear-powered carrier would have to have refueling for aircraft.

Mr. ANDREWS. You would have to have that with the conventional carrier also.

Admiral BURKE. Yes, sir.

Mr. LAIRD. Will the gentleman yield?

Mr. ANDREWS. Yes.

DISPOSAL OF SHIPS

Mr. LAIRD. Did I understand your answer in response to Mr. Andrews' question to be that the carrier could operate alone?

Admiral BURKE. Yes, sir; and in present operations we have our carriers operate very frequently without having any other ships in close proximity to them. The reason for that was shown in the radar chart which you saw yesterday. Our forces are operated in random formations with large distances between ships. We depend upon dispersion and unpredictable courses and speeds to confuse enemy aircraft and submarines while we are detecting them with our radars and sonar equipment. We do not use the close formations of the past any more.

Mr. SHEPPARD. Will the gentleman yield?

Mr. ANDREWS. Yes.

Mr. SHEPPARD. In other words, what has happened as I interpret your response is that because of advances in your radar operation you can now operate with a greater degree of dispersal than previously.

Admiral BURKE. That is correct, sir. We are dispersed much more than we used to be. I do not mean by operating alone that we have just one ship at sea, but they are widely dispersed.

Mr. OSTERTAG. How do you combat submarine threats under such circumstances?

Admiral BURKE. We have ships far out from the carrier itself searching for submarines. When they detect them they can also

kill them. We also have hunter-killer groups in areas where we suspect submarines are operating. Under these conditions submarines have had a most difficult time getting close enough to find the carrier and to do anything about it. We have run a lot of tests on this in the last couple of years.

Mr. FORD. It involves the definition of "alone."

Admiral BURKE. That is right. "Alone" was improper. I should have said widely dispersed.

Mr. FORD. That is different.

CONVENTIONAL VERSUS NUCLEAR CARRIER

Mr. ANDREWS. Admiral, if you had an atomic-powered carrier in a task force, you would not require supply ships for the purpose of refueling the carrier; would you?

Admiral BURKE. Not for the carrier alone; no, sir. But you would have to have oilers to replenish the carrier with aviation fuel for her aircraft.

Mr. ANDREWS. I get the impression from your testimony that you want the atomic-powered carrier but you have settled for the conventional-type carrier on the theory that you would rather have a little bit of something than a whole lot of nothing. You do not think you can get the nuclear-powered carrier. You could not get it from the Navy Department nor from the Department of Defense.

Admiral BURKE. The thing that is essential is an adequate carrier deck with proper facilities for operating modern high-performance aircraft.

Mr. ANDREWS. I agree with you; I think it is necessary. I would like to see every *Essex*-type carrier removed from the fleet. I think it is almost criminal to expect these young men to fly heavy, fast jet planes onto and from a deck the size of that on an *Essex*-class carrier. Your figures show your accident record is about 2 to 1 on the *Essex*.

Admiral BURKE. The pilot casualty record is much more than that, sir—almost 4 to 1.

Mr. ANDREWS. I am like Mr. Sheppard. I hate to see this request. I think you would come out better if you requested a nuclear-powered modern ship. I am certain if you get this conventional-type carrier, it will be the last one ever built. You do not plan to build any more conventional-type submarines; do you?

Admiral BURKE. No, sir; we do not plan on it for our combat submarines. But I would not like to sell conventional-type submarines down the river too much. The reason we do not plan on them is because our submarines have to be long-range craft. There could be very good use for conventional types—if you call a Walter cycle, for example, conventional—for short-range, inshore work. They would be just as valuable as any submarine could be under such operating conditions. But they would be short range.

GUANTANAMO BAY BASE

Mr. ANDREWS. Mr. Secretary, what about your position down in Guantanamo Bay, Cuba? I have read and heard threats on the part of the leader of the Cuban Government to take over that base or to

restrict our use of it. What do you know about it? Have you had any communication with the leaders of the present Cuban Government with reference to Guantanamo Bay?

Secretary FRANKE. I do not know of any communications with the leaders of the present Cuban Government.

(Discussion off the record.)

Mr. ANDREWS. Have you given any thought as to what you would do if your lease were threatened and you were ordered to restrict your activities down there or get out?

Secretary FRANKE. I cannot speak for this because this would probably not be the Navy's decision, it would probably be the decision of the President, a national decision, but I would certainly hope we would never withdraw from Guantanamo under any circumstances.

PANAMANIAN SITUATION

Mr. ANDREWS. You could not. But what are you doing about the Panamanian situation?

Secretary FRANKE. We have the same problem down there. This is not primarily a Navy problem, it is more an Army problem.

Mr. ANDREWS. Do you have a carrier nearby down there that possibly could be used in a short time?

Secretary FRANKE. We have ships operating in that area; yes, sir.

PROGRESS OF POLARIS PROGRAM

Mr. ANDREWS. Are you satisfied with the progress of the POLARIS program?

Secretary FRANKE. Completely.

Mr. ANDREWS. Completely?

Secretary FRANKE. Completely; no reservations whatsoever.

Mr. ANDREWS. Do you expect to have an operational team, sub and missile, before the end of this calendar year?

Secretary FRANKE. We do, on the *George Washington*.

Mr. ANDREWS. That is all for me, Mr. Chairman.

Mr. MAHON. Mr. Riley.

CONSIDERATIONS OF EFFICIENCY IN REVIEW OF SHORE BASES

Mr. RILEY. Mr. Secretary, I believe in your statement you said you were going to have to eliminate some of your Shore Establishment. What weight is given to the efficiency of operation, the results you get, and the cost of that operation when a decision is made to either retain or eliminate a base? I realize you have to have certain dispersal problems to consider, but I want to know what weight is given to the efficiency of the operation and the cost of the operation.

Secretary FRANKE. All of the Shore Establishment, all activities in the Shore Establishment are under constant consideration. We never stop reviewing the necessity of each Shore Establishment activity. World conditions change, conditions change in the Navy. We are in a brand new world today.

For example, guns are going out of use to a considerable extent. This changes the type operations we need in the Shore Establishment. When we reach the position that we find we have perhaps too many

of a particular type of Shore Establishment, then we have to consider all of the questions involved: the dispersal of activities, the efficiency of activities, the local economic situation, everything that is involved, in order to make a determination, which is not easy, as to what Shore Establishment, which particular activity at this time, we should close.

Mr. RILEY. I am wondering how much consideration you give to the efficiency and cost of operation where you have comparative or competitive bases, or bases doing the same thing. In the industrial world if you have a facility that is losing money and have one a hundred miles away making money, and had to close one, you would keep the profitable one.

Secretary FRANKE. That is certainly right.

Mr. RILEY. I am just wondering how much weight your office gives to these matters when they make recommendations in regard to shore facilities.

Secretary FRANKE. We try to give this all possible weight. We try to measure the efficiency of one activity against another activity of the same kind. This is not always easy because the type of product in the single activity is not always exactly the same as it is in another activity. For example, some shipyards are new construction yards. Others are primarily repair and overhaul yards. You cannot compare the cost of a new construction yard against the cost of a repair and overhaul yard.

Mr. RILEY. You can compare the cost of an overhaul yard with an overhaul yard.

Secretary FRANKE. We can do it roughly. This is not as easy as it sounds because no two overhauls are the same. We have tried to do this in the case of destroyer overhauls, which would seem to be the easiest one to do. It is difficult because no two destroyer overhauls are exactly alike. You never do exactly the same thing to each destroyer of two when you overhaul.

Mr. RILEY. They are very similar. I am inclined to believe when your automobile needs a little work on it, you take it to the people who do the best work for the least money. I do.

Secretary FRANKE. Of course; and we try to do that, too.

Mr. RILEY. I think the military people could save a great deal of money by giving more consideration to the cost of operation of their various units and the people who operate them. I am not so sure they give sufficient weight to the efficiency of the commanders who operate your bases, whether or not the base gets recognition as an efficient operation.

Secretary FRANKE. I think in the long run it is recognized in their careers. I think it is pretty generally known who does a good job and who does less than a good job.

Part of this problem, strangely enough, is accounting. You have to have a good accurate cost-accounting system to be able to produce the kind of information you are talking about. We have gone a long way toward getting such systems in our shore establishment activities.

Mr. RILEY. I feel you have new bookkeeping machines of various types which enable you to get this information readily now, whereas, in the old days it took a long time to establish cost criteria, so you can tell what your costs are today in a pretty short time.

Secretary FRANKE. One of the great problems is that total cost is meaningless; total amount of dollars expended in a particular shore

establishment does not mean anything. You have to relate it to individual jobs performed and you have to compare similar jobs in different activities.

Mr. RILEY. I am not such an expert that I can tell you how to run your establishment because I would be lost if I were Secretary of the Navy. For instance, cost of your utilities, your transportation costs for employees, time you have to work, all that sort of thing would enter into overall costs.

Secretary FRANKE. And labor rates.

Mr. RILEY. Yes; all of that would contribute. I certainly think you could very profitably spend a good deal of time looking into these matters to see that we get the most efficient and the most economical results in all our facilities.

Secretary FRANKE. I am completely in agreement with you.

Mr. RILEY. Thank you, sir. A great deal has been said here today about this budget one way and another. In my opinion, you present this budget based on your knowledge and experience and are giving us the best information of which you are capable.

Secretary FRANKE. Yes, sir.

Mr. RILEY. But it is up to us to buy it or reject it, cut it down, or add to it.

Secretary FRANKE. That is correct.

Mr. RILEY. I agree with my colleague from Wisconsin that this is our prerogative and that more weight ought to be given to our decision when we add a project, or certainly the same weight as when we cut out a project.

Secretary FRANKE. That is right.

Mr. RILEY. I do not believe that has been done in the past.

CAPABILITIES OF NUCLEAR VS. CONVENTIONALLY POWERED CARRIERS

A lot has been said about the nuclear carrier. There are one or two questions I would like to have clarified. I believe the carrier is the major difference of opinion in this Navy budget. There may be some differences in other regards, but this is the major difference of opinion between the pros and the cons.

How many more planes can you carry, Admiral Burke, on a nuclear carrier of the *Forrestal* design or the *Enterprise* design than you could if it were a conventional carrier?

Admiral BURKE. They will have the same air groups, sir. You could carry perhaps four or five more planes of a given size on the nuclear-powered carrier.

Mr. RILEY. And the fuel for more?

Admiral BURKE. Yes, sir.

Mr. RILEY. Am I correct that if you build a nuclear carrier and develop an improved core later on, that you would still have the same design carrier and most of your other construction and operational features would be the same but you could replace your old core with the new improved core? I have been told that you could.

Admiral BURKE. Yes, sir.

Mr. RILEY. In other words, if there is any major breakthrough in the nuclear carrier construction, you could put those improvements in without disturbing most of the other construction and operational features that are already in the carrier?

Admiral BURKE. That is correct; we can renew cores quite easily, sir.

Mr. ANDREWS. Will the gentleman yield?

Mr. RILEY. Yes.

Mr. ANDREWS. Is there any doubt in your mind as to whether or not the *Enterprise* will work?

Admiral BURKE. No, sir; it will work.

Mr. ANDREWS. You are sure of it. You have an operational nuclear-powered carrier?

Admiral BURKE. Yes, sir.

Mr. ANDREWS. And it will operate just as efficently as the *Nautilus* has operated as a nuclear-powered submarine?

Admiral BURKE. Yes, sir; it will work.

LANDING ACCIDENT SAFETY RECORD

Mr. RILEY. You referred to the accident frequency being reduced in the air arm of the Navy. Then you said the accident frequency on the smaller carriers was about 4 to 1 greater than it is on the larger carriers. Is that correct?

Admiral BURKE. That is correct, sir.

Mr. RILEY. There must have been a tremendous reduction in accident frequency on the larger carriers to create an overall reduction when you have such a high frequency on the smaller carriers. Is that a logical deduction?

Admiral BURKE. Yes, sir.

Mr. MAHON. Will the gentleman yield?

Mr. RILEY. Yes, sir.

Mr. MAHON. The frequency of accidents on all carriers, fatal accidents, is very low. I do not know whether the percentage is in the record, but I think it would be well for it to appear.

Admiral BURKE. We can put our accident rates broken down in several different ways in the record if you like.

Mr. MAHON. Do that.

(The information follows:)

STATISTICAL LANDING ACCIDENT SAFETY COMPARISON ("FORRESTAL" VERSUS "ESSEX")

1. Carrier size has a decided influence on carrier landing accident rate. Accident frequency (and potential) on *Forrestal* size decks as compared to *Essex* size reveals a much higher operational effectiveness for the larger ship.

2. In a study made of the relative safety records, variables were reduced to minimum and samples used were large enough to limit effect of random variation. In this case:

(*a*) Used same aircraft models throughout: F–8U, F–3H, F–4D, A–4D, A–3D, F–11F.

(*b*) Used same calendar period—July 1, 1956, to September 30, 1959—to limit effect of weather and material changes in aircraft or ships.

(*c*) Number of landings analyzed was of ample magnitude for sound conclusions.

(*d*) Confined analysis to landing accidents because this is most critical phase of flight, is most carefully supervised and recorded, and is one in which ship size is a most significant factor.

(*e*) Statistics were developed on basis of rates per 10,000 landings.

3. Definitions of terms employed are—

(*a*) *Carrier landing:* Any touchdown on carrier deck. Includes day and night arrested landings, touch-and-go, practice landings and "bolters" where pilot must "go around" for another approach.

(*b*) *Carrier landing accident:* Major damage to an aircraft occurring during an actual touchdown on deck which resulted in termination of the flight or loss of the aircraft over the side. The landing deck area of the ship or its equipment/facilities must have been a factor in the accident.

(*c*) *Aircraft strike:* Damage beyond repair.

(*d*) *Overhaul damage:* Damage repairable by major rework.

(*e*) *Dollar loss:* Initial cost for destroyed aircraft, or repair cost for others.

4. Statistics for the comparison:

Period July 1, 1956, to Sept. 30, 1959

Carrier class	Actual landings	Major landing accident rate per 10,000 landings	Actual number of strike damage accidents	Actual number of overhaul damage accidents	Fatal accident rate per 10,000 landings	Actual landing accident dollar loss
A (*Forrestal* size landing area)	39,124	12	7	15	0.8	$13,109,600
B (*Essex* size landing area)	65,487	20	37	29	2.7	49,417,200

5. Primary conclusions:

(*a*) Operating similar aircraft, the *Forrestal*-size carrier has approximately 60 percent of the landing-accident rate of the *Essex* class.

(*b*) The *Forrestal* accidents produced only one-fifth of the strikes and one-half the overhaul damage of the *Essex* accidents.

(*c*) Dollar loss per arrested landing resulting from accidents averaged out against all arrested landings, is more than twice as great for the *Essex* size—the difference between $754 per landing and $335 per landing.

(*d*) Fatal-accident rate in *Essex* size is 3½ times that of the *Forrestal* class.

(*e*) Accident rates are reduced as carrier size increases. This is vitally important in terms of lives of pilots and expensive aircraft. The reduction of combat effectiveness through aircraft accidents is also important.

6. Supplemental information:

(*a*) The overall bolter rate for the class B carrier was 19 per 100 arrested landings; for the class A carrier this rate was 13. Bolters reduce effectiveness of operations because of delay in completion of recovery periods, and delay to other aircraft awaiting recovery which may be low in fuel, with consequent lowering of safe fuel margins.

(*b*) There was no essential difference in the accident types for either class of carrier and the relative percentage of accident types was approximately the same. For example, there were twice as many hard landings on the class B carrier as on the class A and twice as many ramp collisions. Therefore, the hazards are reduced across the board in operating modern high-performance aircraft from a *Forrestal*-size ship.

(*c*) Only 10 percent of the accidents on the class A carriers involved pitching deck conditions compared to 25 percent of the accidents on class B carriers. This is in spite of the fact that operations of class B carriers are often not even attempted in certain adverse weather conditions which are accepted by the class A ships. Thus, the greater stability of larger hulls in heavy seas is an important factor in flight safety.

Mr. MAHON. The record would also show that the accidents in the other services—for example, the Air Force—are probably greater than or as great as in Navy aircraft. That is something you would have to develop otherwise.

Mr. ANDREWS. Will the gentleman yield?

Mr. RILEY. Yes.

Mr. ANDREWS. This record has been true for a number of years, has it not?

Admiral BURKE. Yes, sir; it is coming down slowly.

Mr. ANDREWS. I mean by that, you always have more accidents, more fatalities, on the smaller deck than you do on the bigger deck.

Admiral BURKE. Yes, sir.

Mr. ANDREWS. That was true when you compared your *Essex*-type carriers to the smaller pre-World War II carriers, was it not?

Admiral BURKE. Yes, sir; it was true, but not so marked then as it is now.

Mr. ANDREWS. Your planes were not as fast?

Admiral BURKE. The planes were not as fast nor as heavy.

Mr. ANDREWS. Thank you.

OVERHAUL COSTS FOR NUCLEAR-POWERED SHIPS

Mr. RILEY. The question was raised here about the overhaul of nuclear ships. There is nothing mysterious about having a high overall charge on a new ship. That has been true of all new machinery from the beginning of time. I remember when the automobile used to stay in the garage more time than on the road. I can also remember if you got three to five thousand miles out of a set of tires, you were fortunate.

Admiral BURKE. Yes, sir.

Mr. RILEY. Knowledge gained by experience in maintaining any mechanical equipment comes down with the experience gained on the overall picture. These high costs that you start off with do not alarm me to any great extent because I think they will gradually come down if you have a succession of ships of similar design to operate and trained maintenance crews to service.

Admiral BURKE. They will undoubtedly come down, but how much they will come down will depend upon a great many factors. This still will be higher, probably, than conventional.

Mr. RILEY. I am not sure they would cost more than the conventional types after you learn how to operate them, use them, and repair them.

Admiral BURKE. I hope not.

Mr. RILEY. It is reasonable to suppose because it has happened in everything else. It would be unusual if it did not happen in this case.

Admiral BURKE. That is correct, sir.

Mr. RILEY. Last year in my discussion with you I suggested that you had to have more tankers and supply ships for your conventional carrier than a nuclear carrier and they would have to be added to the cost of the conventional carrier. A year has now passed, and I have not changed my mind on it. I still think that you have to have more supply ships of various kinds to go with your conventional carrier which you do not need with your nuclear carrier and, therefore, the differential in cost is not as great as appears on the surface.

Admiral BURKE. It is true the tanker costs, cost for the transport of the ship's fuel, would be an added charge.

Mr. MAHON. Will the gentleman yield?

Mr. RILEY. Yes.

COMPARISON OF FREQUENCY OF SUPPLY CONTACTS

Mr. MAHON. Give us at this point some information as to how often you have to resupply a carrier—that is, resupply it with food for the men and general supplies.

Admiral BURKE. Would you like conventional versus nuclear-powered carrier?

Mr. MAHON. Either way.

Mr. FLOOD. Plus change of crew.

Mr. RILEY. It would be a logical comparison to have the frequency of the supply contacts for the conventional carrier and for the nuclear carrier. I do not think you would need as many supply ships for the nuclear carrier as for the conventional. I would like to know the cost of the ships needed for conventional carrier as against the cost of the number of ships required to supply the nuclear carrier. I think this enters into the picture.

Secretary FRANKE. Yes.

(The information to be supplied will appear in a subsequent volume.)

Mr. LAIRD. Will the gentleman yield?

Mr. RILEY. Yes.

Mr. LAIRD. Is that predicated on the premise that Admiral Burke used, that this carrier would operate alone?

Mr. RILEY. I believe he changed that to say they were widely dispersed.

Mr. LAIRD. That all plays a part of this, I think. If you assume the carrier operates alone, then your statistics are much different than they would be if you did not assume they operated alone.

Mr. RILEY. That is right, but they do have to have supplies from time to time.

I have another thought in connection with the nuclear carrier. The more frequently you have to supply your carrier the easier it will be for the enemy to discover where it is, in my opinion. Is that right?

Admiral BURKE. That is right.

Mr. RILEY. That is all, Mr. Chairman.

Mr. MAHON. Will you submit to us a statement you propose to put in the record in response to these last questions in order that we might interrogate you further, if necessary?

Secretary FRANKE. Yes, sir.

Mr. MAHON. The committee will stand adjourned until further notice.

THURSDAY, JANUARY 21, 1960.

Mr. MAHON. We will resume our hearing on the Navy budget. The Chair recognizes Mr. Flood.

Mr. FLOOD. Mr. Secretary, I am about to aid and abet the enemy. You are now looking at somebody who, under this new yardstick of the budget and the Defense Department is not quite 100 percent American. I probably have elements of treason in my soul, all that kind of thing, because this budget does not come to me as sacrosanct. I think there are some things the matter with it. Mirabile dictu. Can you imagine that? I fly in the face of the gods. It is a heedless abandon of reason. I am a very bad guy.

I remember from my Blackstone a hundred years ago there was an expression, Rex non potere est, which literally translated, as lawyers translate such things, means "the king can do no wrong."

My ancestors came here from Ireland 220-some years ago because we did not believe it then and I do not believe it yet.

There is another old, moth-eaten legalism, omnia homines non est perfectum—"men are not perfect." Believe it or not, that includes you and me, which is going pretty far, but I think it is so.

Secretary FRANKE. I would be the first to admit it.

Mr. FLOOD. Yes, I would break down and admit it. I just think this attitude that is presented here by the Department of Defense, as espoused by the Secretary and by General Twining, is unbelievable. You people say in effect "If you dare to question the propriety and the sufficiency and the quality and the quantity of our weapons systems and our posture—you must not do that, the Russians are liable to believe you, Flood, and if you do, there will be disaster to pay. You will bring war and missiles. You would be responsible for a cataclysm and world war III. They are liable to misconstrue the facts and think we are weak and puny and poor. Do not talk about these things. That is not right. We know what we are doing. We know more about this than you do, you congressional morons that sit up on that committee there for 10 years and see Presidents and generals and admirals come and go like Greyhound buses." But the fact is we do sit here and some of this rubs off on us.

I do not think this is so awful to have the point of view that I have. I think that there are a lot of things wrong with this budget. I think its whole concept for limited warfare, whatever that is, is completely wrong. The manner in which they cut the Marines, the manner in which they handle your ships and do not give you crews, I think that is wrong. I think the Army should have at least 5 or 6 or maybe 10 more divisions than it has. The budget is not that sacred to me. This business of walking across Niagara Falls on a rope is a good trick, whether you do it or not. I am not interested in balancing acts.

Just so we know there are still some rebels left, I am not impressed. I am impressed by this attitude downtown. I am amazed—in the United States of America. Well, well, well, not me, not while I have breath in my body, whoever the President is, Democrat, Republican, or anybody else. I think some of this is wrong. I want to talk about it.

COORDINATION OF STRATEGIC BOMBARDMENT SYSTEMS

Admiral, this may be more yours than the civilian people. I am shocked by what my spy system sends to me from the Pentagon and from throughout the country that the Air Force is actually serious about this POLARIS business. I think that is more important than whether the President is the greatest military leader in the United States or not.

Here is a great weapon system that these fly boys are not fooling about. I thought they were kidding, I thought it was a diversionary operation last year to get bombers or something on a deal with the Joint Chiefs of Staff, like you fellows do every once in a while. I did not think they meant it. But, by golly, they do. It has gone to Secretary level. It is going to be there in the next 30 days again for the Secretary of Defense to decide whether or not the POLARIS system, your pigeon, should or should not be assigned to the Air Force as a strategic bombardment weapon. Without being profane, will you comment about this?

Admiral BURKE. Yes, sir. The proposition that the Air Force proposed was not that the Air Force take it over exactly, but that they provide a strategic commander in command of all delivery

systems, including POLARIS, SAC, ICBM's, IRBM's, and all the rest.

Mr. FLOOD. Strategic bombardment weapons?

Admiral BURKE. That is correct. They base that on the need for coordination. That is the reason for submitting the proposition.

Mr. FLOOD. Air Force coordination?

(Statement off the record.)

COMMAND OF POLARIS SUBMARINES

Mr. FLOOD. You know our limitation of time here, and I do not want to interrupt you. This concept could go on all day. I have never felt it has been met head on by this committee or anybody else, it has merely been barroom gossip or whispered around the dining rooms. It is obviously a planned and determined effort to incorporate this POLARIS system of the Navy into some strategic bombardment concept of the Air Force. No question about that, in my opinion. That should not be done. This is becoming increasingly known to the public. I want you to use this record, upon my invitation, to present your position on this.

I personally hope that if and when this reaches the Joint Chiefs level for final action before it goes to Secretary level, if your name is Burke, I think you know how to handle the Navy's case.

Admiral BURKE. Yes, sir.

Mr. FLOOD. I expect you would, and I am sure you will. Do not let these jokers push you around. That is nonsense.

(The following was submitted later:)

COMMAND OF POLARIS SUBMARINE

The commander of the POLARIS submarines will be responsible not only for the effective use of the missiles and the other war equipment such as torpedoes of those submarines, but also responsible for the safety of those submarines including the lives of people in them. Furthermore, the people in those submarines must know that they have a commander who knows how to operate naval forces—including submarines—a commander who knows what to do if they get into difficulties, without having to be instructed what to do.

The coordination of operations of ships at sea, including naval aircraft and submarines, is basic and vital to effective naval operations. POLARIS submarine operations must be coordinated with those of other friendly submarines for protection, reconnaissance, and mutual support. Their operations must be coordinated with friendly antisubmarine forces to insure noninterference, safety, and mutual effectiveness. Their operations must be coordinated with friendly naval air operations for the same purpose.

A proposal has been made to separate missile submarines from the operating fleets and place them in a single strategic command. This type of proposal is not new. Several times since World War II, proposals have been advanced to separate naval aviation from the Navy and place it under a single command which would command all U.S. military aircraft. At other times there have been proposals to remove land-based naval aircraft from naval command. And still other proposals have been made to place operational control of naval aircraft carriers under some command other than the Navy's.

These various proposals have been rejected as impractical as regularly as they have been advanced. The current proposal is similarly unsound and impractical. It completely ignores the fact that in the case of missile submarine operations the prime requisite is for coordination of the submarines prior to the launching of missiles.

Essential elements for effective employment of POLARIS submarines include the preplanning of targets for the missiles, control and coordination of the submarines—the missile platforms—and the order to launch. Of these three ele-

ments, that of control and coordination of the submarine is the most difficult to achieve.

Coordination of atomic planning is a function of the Joint Chiefs of Staff—a responsibility they properly exercise. Selection of targets, formulation of plans as to what to hit and how to hit it, is accomplished under JCS supervision and coordination. Target assignments are made and delivery vehicles indicated in these plans. The plans and procedures are reviewed by the unified commanders concerned in detail annually in a commanders' conference. Integration of POLARIS missiles into these plans is relatively simple—much more simple than coordinating highly specialized submarine operations with the dynamics of operating naval forces at sea. Coordination of the mobile platforms, the submarines, with each other and with other naval forces to insure that they are effective—this is the significant thing. Ineffective coordination of the submarines could derogate their capability.

The order to launch an attack, should that order ever become necessary, can be given only by the President. The Secretary of Defense, JCS, the united commanders, and all of the total military forces of our Nation will be immediately responsive—POLARIS submarines included. These submarines in the oceans, with their invulnerable and inevitable retaliatory capability, represent a significant contribution to our country's deterrent posture.

There is no requirement for effecting missile coordination after launch. Unlike manned aircraft, such factors as time over target, identification, communications, etc., are not critical to ballistic missiles in flight. The ballistic missile once fired is not subject to control like an aircraft. Since ballistic missiles will arrive over their previously assigned targets in a matter of minutes there will be no interference with manned aircraft which will arrive over their targets much later.

In any area of the ocean where FBM submarines operate there will be other submarines, surface forces, and antisubmarine forces, including naval patrol aircraft. These will be our own, those of our allies, and those of any enemy. The degree of coordination and mutual support necessary to insure the safety and effectiveness of our FBM submarines in such an environment is readily apparent. The submarines must know the location, the movement, and the intention of all U.S. and allied submarines and antisubmarine forces including antisubmarine naval air forces operating in the area if the action required to insure continued safety and effectiveness is to be taken. U.S. and allied forces operating in the area must be carefully and continually coordinated if we are to avoid the inadvertent destruction of our own submarines. There must be defense against enemy action—including enemy submarines. The selection of operating areas must be carefully integrated with knowledge of friendly forces and intelligence of enemy forces. The system of havens and sanctuaries necessary to prevent mutual interference and insure safety is both intricate and important.

The capabilities of seagoing ships must not be jeopardized by insufficient coordination with all other activities at sea in the same area. Submarine operations are highly specialized operations which involve complex systems of havens and sanctuaries—and identification of friend and foe. Ineffective control will seriously downgrade our own and allied naval effort including ASW, and will increase the possibility of sinking our own submarines. There must be effective coordination and mutual support.

It is intended that POLARIS submarines will not conduct operations that will degrade their capability to implement their primary mission. However, POLARIS submarines do have operational capabilities similar to other submarines. These capabilities derive from the submersible nature of the submarine and the medium in which it operates. They enhance its major POLARIS firing role and also give it a wide range of combat capabilities. Without in any way degrading its primary deterrent capability and retaliatory mission, the POLARIS submarine can perform tasks similar to many performed by other submarines—passively before executing missile launch and actively when all missile launches are completed and the primary mission has been accomplished. These multiple capabilities are significant in that they emphasize that the missile submarine—like its sister nonmissile submarines—is a combat vehicle which requires a very high degree of naval coordination.

The Navy is about to place into operation this powerful new naval offensive capability, the culmination of years of effort and determination on the part of the Navy to keep its offensive capabilities of maximum usefulness to the United States. POLARIS submarines herald the likely development of an entirely new

family of naval weapons, including other sea-based missile systems, which will grow in effectiveness and versatility as time goes on. These submarines are a logical continuation of the long-established practice of adapting the most powerful weapons of the age to shipboard use.

This new and important advance in naval offensive strength is about to become a reality. These new ships must be integrated into our naval combat forces with all the know-how and experienced attention that can be mustered, including personnel, operational training, material maintenance, and fleet logistic support. All the many items that will contribute to an early and continuing state of maximum readiness must be as expert and as complete as we can make them. The highest order of combat effectiveness of this submarine must be developed and maintained. Further, the operational activity, on station assignment, and logistic support for these ships must be detailed and expertly coordinated. Logistic support of the submarines, sailing routes, support in case of casualty or malfunction of equipage while in operating area and return transit are some of the considerations which require naval know-how and experience. They involve coordination with other similar ships and, as a practical matter, with all fleet elements.

Naval warfare experience has shown in the past, and tactical experience now shows, that naval weapon systems, operating as they do in the unique environment of the sea, achieve greatest effectiveness and efficiency through closely integrated, balanced fleet organization and operation. Fleet organization and employment are quite different from functionalized organizations sometimes preferred by other services. A balanced fleet is composed of many types of versatile, mobile, seagoing bases. These ships—including submarines—are mutually supporting and mutually dependent.

I have outlined some of the practical considerations which govern the effective operation of missile submarines. The Joint Chiefs of Staff exercise strategic direction of the Armed Forces. This responsibility includes control and coordination of nuclear striking forces. Attention is invited to the fact that all of the operating fleets of the Navy are already assigned to unified commands under the Joint Chiefs of Staff. Operations of these fleets, including their submarines, are effectively coordinated with operations of the forces of other services by the unified commanders under a thoroughly tested, smoothly running system of command.

The Navy has behind it generations of experience in the operation of sea-based weapons systems. To depart from the principle of the integrated, balanced fleet at this critical time in history by assigning POLARIS submarines to a command charged with operating land-based strategic bombers and missiles would weaken our Nation's ability to strike back. It would reduce the effectiveness of our POLARIS submarines by artificially creating many serious operational problems. The enemy will create enough problems for us at sea as it is. Let us not deliberately create more of our own.

The proposal to remove POLARIS submarines from our operating fleets and lump them into an overall strategic command is both impractical and dangerous.

(The following material was submitted by Mr. Flood for insertion in the record at this point:)

[From the Daily Pantagraph, Bloomington, Ill., Nov. 17, 1959]

WHAT SCARES ENEMY—ICBM OR SSBN?

These stories which have been appearing in a number of newspapers are sent you in the interests of national defense. They may be reproduced, in part or as a whole, with or without credit.

(Eighteenth of a series)

WHAT'S THE PLAY—TOO MANY PLAYERS TO LET AIR FORCE QB SPACE GAME

This is another in a new series dealing chiefly with measures for advancement of national security to meet the continued Red threat. The articles derive largely from the writer's experience as editor, publisher, and foreign correspondent extending over some 40 years.—Editor.

(By Davis Merwin)

Just how space will be controlled hereabouts still leaves a lot to the imagination of a multitude of Washington agencies—including the Armed Forces, that

have roles and missions closely dependent on something more than a seat at the sidelines.

The Air Force, with its type of aircraft heading rapidly toward the limbo, has fought for the top spot and is generally assumed to be headed for it under the recent Defense Department directive. However, the DOD announcement reads simply: "A plan for the progressive and orderly transfer of space projects from the Advanced Research Projects Agency (ARPA) to the military departments was announced * * *. This is being done to prepare for the shift from development to use of space systems, and to simplify administrative procedures."

The announcement continues: "ARPA will continue to be responsible for advanced research in such fields as advanced missile defense, solid propellent research, materials, and such other projects * * *."

Then the supposed clincher: "Basically, the plan provides for eventual assignment to the Air Force of responsibility for the development, production, and launching of military space 'boosters'; and (provides) for the separate assignment of development responsibilities for payloads (such as warheads and instrument packages) and specialized ground support equipment for space and satellite systems to the military departments on the basis of primary interest or special competence."

The writer emphasized the word "boosters" and inserted the parentheses for clarity.

For not only has the Air Force long had actual control of rocket boosters, but the use of the term "eventual" leaves the situation flexible.

OUTLINES JOBS

The same official news release definitely allotted development of satellite payloads:

1. To the Air Force, Midas and Samos, which apply respectively to early warning against ballistic missiles, and reconnaissance;
2. To the Navy, Transit, a satellite-borne navigation system;
3. And to the Army, NOTUS, a communications system.

All told, nothing has been done publicly except to express intention to eventually formalize the Air Force's long-standing priority in the booster business and hand it the early warning and reconnaissance assignments. But behind the scenes there continues a hot contest with the Army, which is in grave danger of losing entirely its Ballistic Missile Division (ABMD).

EYES ON SATURN

The ABMD has been represented chiefly by the Redstone Arsenal at Huntsville, Ala., which has pioneered so ably. Yet it is being relegated to the role of a supplier—if it survives. Meantime, there is strong pressure to divest Huntsville of its all-consuming project, Saturn, the superbooster engine designed to quadruple the potency of our top rocket, with 1.5 million pounds of thrust.

To say that the Army—including General Medaris and Dr. von Braun—is unhappy, is the understatement of the year. Perhaps the boys in olive drab are finally waking up to the fact that the Air Force is their worst enemy.

The shots will be called in this latest convulsion of reorganization by the first Director of Defense Research and Engineering, who is none other than the recently appointed young Dr. Herbert York who, it may be hoped, will cling to a trace of perspective, despite his dictatorial authority. If so, he'll be among the first of the new breed—the all-powerful few—to rewrite the laws of human nature.

EDITORIAL SNIPING

Some recent biting sarcasm, an editorial in one of the Nation's larger newspapers made its contribution to interservice harmony with this: "The Navy this week proposed, apparently seriously, the creation of a 'unified' command over space vehicles and weapons * * *" and added erroneously that the plan was "patterned after the Strategic Air Command." It added the Navy's suggestion "that the commanders would be selected in rotation from the Air Force, Army, and, of course, the Navy."

This Navy proposal for unification has already been mentioned here, and it is clearly sound because of the colossal task and the success of precedent.

The editor followed with this obliquity: "This is something like a man with a single share of stock demanding to be on the corporation board of directors." Then the tall one: "The Navy's only real 'share' of advanced strategic missile or space programs is the POLARIS missile which the Air Force has already said it wants in its SAC." What neater proof of the Navy's brilliant spot in space?

SAC PLAN DANGEROUS

Some time ago, it was pointed out here that the Air Force's Strategic Air Command covets, and will of course be handed, the Navy-developed POLARIS missile. Moreover—which the editor omitted to disclose—SAC has officially demanded control of the specially designed submarines built around this pinpoint missile.

The SAC demand is hazardous, in that the big bomber boys' bid for an unschooled effort to operate a highly specialized part of the Navy could easily play straight into the hands of the Kremlin.

But most important, the attempted grab highlights the fact that the USAF at last recognizes an actual bargain. Moreover, it's finally aware, after years of unfettered top priority, that it hasn't come up with one single long-range missile that is truly "operational."

OUR TARGET'S SHOWING

Even if TITAN and ATLAS were dependable—and MINUTEMAN were in the offing—their use in these multi-billion-dollar bases, still dispersing over the United States, would make our cities and other concentrations of humanity prime targets for the enemy whom we have begged to shoot us first.

USAF's plush Strategic Air Command now seems awake to the advantages of mobility and concealment, to the capacity to pinpoint enemy targets with thermonuclear warheads from short range—for launching takes place below the surface of the sea.

In the face of the Navy's development of both missile and submarine and its long generations of mastering combat afloat, that editorial writer had one last vaporous fling: "The rivalry over whether a ballistic missile is an unmanned bomber or an artillery shell makes little more sense than the Navy's insistence that rocket ships should have an admiral on the bridge." The last jibe refers to the Navy's suggestion for rotation of such a huge and complex command, having in mind that even though the top man would shift from time to time, the program would be staffed with a combination representing all services.

OUR BEST WEAPON—POLARIS PROVIDES NEEDED MOBILITY, PINPOINT TARGETING

(Twentieth of a series)

(By Davis Merwin)

Why does the USAF's Strategic Air Command—which has yet to function—want to get its hands on Polaris, the Navy's latest and most potent nuclear weapon system? There are a number of reasons.

Taking the negatives first, look back to earlier discussion here and find that under all the circumstances, if we persist in our international policy of being hit first and if the Soviets perfect and amass their long-range missiles as neatly and quickly as they have other weapons and mechanisms—and if we can believe Mr. Khrushchev, who is pretty convincing—the Muscovites and their flunkies will wait just long enough for an adequate supply of these weapons.

Then they will push the button that will wipe out half our population and our land bases for retaliation, either in their present state, or if they've been "hardened" according to the current plans. But to implement those hopes will take another couple of years and a lot of steel, concrete, and billions of dollars.

CAN HIDE, STRIKE

What's the alternative? We already have in action the atomic retaliation punch of naval carrier aircraft and, coming soon, the Polaris system—our sole hope for sure retaliation. These task forces, exclusive to the U.S. Navy, will roam the high seas, profiting by the evasive speed and concealment peculiar

to the briny 75 percent of the earth's surface. Thus, they are or will be not only free from attack, but prepared to strike without warning.

What would you do if you were a Commie? You would prefer the fixed installations of the land-based U.S. forces, and shudder when you thought of the streaking, hidden movements about your shores of naval forces adapted both to massive retaliation and prosecution of limited action of the sort frequently demonstrated since World War II.

As will be further demonstrated, the U.S. naval service has been so consistently shortchanged by budget slices and "expenditure ceilings" that its ships, aircraft, and other equipment have steadily diminished to the danger point—and will drop steadily further unless apportionment is changed. Under these circumstances, would you give the U.S. Air Force annual sums closely approaching half of our total defense budget?

FEARED, COVETED

Or would you speed construction of our two most effective war vehicles, the aircraft carrier and the POLARIS-missiling atomic submarine that leave no doubt in the enemy's mind of the threat they pose? In short, you, the Kremlin, would not only hesitate a long time before attempting a massive attack, but you would think with deliberation before indulging as much as heretofore in the transparencies of these lesser actions around the world mounted by your stooges.

And if you were in the Air Force you would make every effort to grab POLARIS as you did the air-cooled radial aircraft engine in World War II, after having ridiculed it and concentrated on another type which you subsequently discarded almost in toto.

As the Department of Defense you would develop as fast as possible POLARIS, because this missile can go into action in a matter of seconds or minutes at the most, whereas the top-prioritied ICBM, ATLAS, not only still delicate and unreliable, requires literally days of advance notice for firing, plus something of the order of an hour or more for final arming by injection of the sensitive and hazardous liquid fuels.

The Navy, though but briefly devoted to POLARIS, has taken years developing the solid propellant scorned by the others. Built around this unequaled propellant, the POLARIS missile can safely be tossed around and finally touched off with essentially no preparation.

An ex-Army officer, Maj. George Fielding Eliot, has for years been writing on defense—with perception and wisdom. In last Sunday's newspaper supplement, Family Weekly, he did a masterful job on this subject under the title "Why America Will Never Be Bombed."

After dwelling on present prospects of a "complete surprise knockout of all our bomber and missile forces," and mentioning the cessation of long range bomber construction by the Soviets, and their production already of hundreds of ballistic missiles of ranges up to 1,300 miles, he emphasizes that we not only haven't a working system to warn us that we'd have no chance to launch in the event of an all-out attack, but that because of present inability to intercept incoming ballistic missiles, "our present relative security fades into growing danger as the Soviets gradually acquire the means for their hoped-for surprise knockout." He follows with the judgment "After 1962 the danger will have become acute—unless we do something about it in the meanwhile."

Skipping over a number of meaty observations, we find Major Eliot plunging into his solution when he says "The answer to the Soviet missile threat is a very simple one: We are going to create and expand our nuclear striking power in a form which cannot be destroyed by surprise * * * so located and organized that the Kremlin can never hope to destroy it in any sneak attack."

Then he points out that "The Navy's 14 attack aircraft carriers pack a powerful nuclear punch in their heavy-strike aircraft, which can deliver nuclear weapons to any target within 1,500 miles of the carrier's deck."

And finally, after introducing the U.S. Navy's new missile submarine and the 16 POLARISES that each can stow and launch, he adds that "When at sea, neither aircraft carriers nor missile-armed submarines can be attacked successfully with ballistic missiles (ICBM–IRBM). Nor can the Soviets count on destroying such targets by surprise in any other way. These are moving targets which have to be searched for, found, and identified before they can be attacked, say by aircraft or submarines, and against such atttack there will be warning."

ITS TOP DETERRENT

Perhaps Major Eliot's most penetrating judgment is summed up in the following:

"There is no safety factor for the U.S.S.R. in such a situation. There could be no Soviet assurance of destroying even one carrier or POLARIS submarine in time to prevent its nuclear weapons being launched into the Red heartland. A 1,500 mile range is ample. * * * Therefore we have, in our sea-based forces, the ultimate deterrent against ballistic missile attack on the United States."

In summing up, the major opines: "I do not believe that we will go on wih the suicidal course of studding our homeland with fixed missile bases that can only be targets for Soviet missiles.

"I believe that we will seek our safety in power in motion, not power sunk in concrete-lined pits; in freedom of action against a landlocked foe, not in becoming immobilized ourselves, and thus adopting his disadvantages. I believe that we will survive the period of danger just ahead of us by using the mobility of sea-based weapons * * *."

Amen, Major Eliot, and this is especially interesting coming from you as one with a background of land-based combat.

NUCLEAR-POWERED AIRCRAFT

Mr. FLOOD. When Secretary Wilson was here a number of years ago, I tried to ask him to explore the moon with me or hit it with tin cans or a slingshot or something, but hit it quick. He laughed at me and said he is not interested in finding out whether the moon was made out of green cheese. This is about a year before the Russians shot Sputnik. Those things happen here.

I am having the same attitude with the Department of Defense and everybody down there about a nuclear-powered aircraft. I do not care how big it is, I do not care how slow it goes, and I do not care how much it costs. I want the Department of Defense to propel an airframe with nuclear power 50 feet off the ground, 20 miles an hour if need be; but move it by propulsion of nuclear power, not put a nuclear reactor in an airframe and carry it across the river. You know what I mean.

Admial Hayward told us last year, or I got the impression from him, he was closer to it than anybody and the Navy could do it. The Air Force are obviously kicking it around; nobody seems to be seriously interested. Admiral Hayward seemed to be hot about it; he thought the Navy could do it. What about it?

Admiral BURKE. We had an indirect cycle aircraft nuclear-powered engine which we thought could be made to work after a few more years' research. It was quite expensive. It would be used in a test aircraft. The military value of this is dependent upon what develops from the test and nobody would know at this stage of the game. As a result of many conferences, the Air Force has primary responsibility for a nuclear-powered aircraft now, although we still contribute a little money and talent to the powerplant.

Mr. FLOOD. Is that part of their mission, nuclear propulsion in an aircraft? Is that an assigned mission of the Air Force?

Admiral BURKE. It is not an assigned mission, but they were given this particular task.

Mr. FLOOD. Do you think this Admiral Hayward can do this?

Admiral BURKE. I think we can do it.

Mr. FLOOD. I am speaking strictly at this point of a scientific, psychological, military advantage for this country for a change. I am sure the Russkies are going to do this; I am sure they are going to

do this first. All our people, Wilson, wherever he is, may laugh at that, and say it does not mean a thing. That is a matter of opinion. It is a horserace. I would like to see the United States propel an aircraft by nuclear power first actually. If you think the Navy can do it, if you think it is worthwhile, if you think it has this tremendous psychological advantage or potential impact that I am sure it has—a lot of people do all over the world—why do you not try harder for it? Why do you not make a point about it? Why do you not twist somebody's arm?

Admiral BURKE. Because it costs too much.

Mr. FLOOD. I am not interested in that.

Admiral BURKE. We are. As you say, it would have considerable psychological impact, but it costs a tremendous amount.

Mr. FLOOD. But it is not worth it?

Admiral BURKE. The cost is too great.

Mr. FLOOD. That is the end of the argument, not with me, but with you people who have the other problems. That is what I am afraid of. That is why I think much of our defense operation is a second-class show vis-a-vis the Russians. This statement of mine could be reported to the U.S. district attorney, this is treason according to the new line in Washington. That is what I think. The reason I think so is because the budget is placed before what I think should come first, among other things, including a nuclear-propelled aircraft. That is what I think.

Mr. MINSHALL. How much would one cost?

Admiral BURKE. I do not think anybody really knows, sir, but the experimental work would be at tremendous cost. I can look it up and put it in the record.

Mr. MINSHALL. Thank you.

(The matter referred to follows:)

ESTIMATED COST OF AIRCRAFT NUCLEAR PROPULSION, IF DEVELOPED BY THE NAVY

The R. & D. cost for the propulsion system (minus the reactor) and the airframe would be approximately $110 million if the British *Princess* seaplanes were used. This aircraft is the only existing seaplane airframe considered feasible to house the nuclear engine.

The cost would be appreciably higher (about $200 million) if a new airframe had to be developed.

Concurrent with the airframe adaptation and engine development, the AEC would have to spend about $125 million to develop the reactor. Both programs would extend over a 5- or 6-year period. These costs are only those necessary to provide one operable nuclear aircraft.

The additional costs of special bases, handling facilities necessary to support equipment and facilities peculiar to utilization of nuclear power would have to be added to this if an operational system were to be developed.

Mr. FLOOD. I am not afraid the Russians will get copy of what I just said and that because of what we have said here in this committee now they will probably attack Thursday. What utter nonsense.

RETENTION OF BASES IN PANAMA AND GUANTANAMO, CUBA

I would like to be assured, since you have nothing to do with the policy, of course—that is at another level—but as far as the Navy is concerned, if it was up to you, I would like to be assured that as far as you are concerned you have no intention of pulling out of the

Panama Canal area for whatever operations you have there, that you have no intention of pulling out of Guantanamo, and that the Navy has no intention of pulling out of Chaguaramas in Trinidad. That is, as far as the Navy is concerned, having nothing to do with policy.

Admiral BURKE. You are absolutely correct.

Mr. FLOOD. Now I will be persona non grata with this long-haired agitator, Williams, in Trinidad. I have been tossed out of Panama, Cuba, North Korea, North Vietnam, and now I suppose I will spend my time in south Wilkes-Barre. He is a menace, too, Williams, a bad actor and violently anti-American.

MARINE CORPS STRENGTH

We have only 15 minutes, General, to dispose of the Marine Corps. That is about the way you rate around this town any more. We will take care of the Marines in 15 minutes. That is about the way you rate around here any more, as far as I can see.

I am at a total loss to understand how these glorified bookkeepers and accounting clerks at the Bureau of the Budget have decided that, despite what all the Marine Corps generals say and despite what you say and what you think yourself—or at least what I think you think—and despite the action of the Congress of the United States 3 or 4 years in a row—but nothing has less value with the Bureau of the Budget and the executive as far as military matters are concerned than an act of Congress, but nothing, particularly as it refers to the Marine Corps.

We are laboring under the very silly impression up here according to the Budget people that we think the people of the United States want your Marine Corps to be bigger than the executive insists that it must be at 175,000. We tried to do that two or three times, year after year, but they just laugh at us, as is their wont, and you wind up with 175,000.

I have here an excerpt from the Congressional Record which printed the personnel and manpower chapter of your first order to the troops of the corps after you took over. I forget what it was or the name of it, but you issued some kind of statement as the new Commandant. By the way, I do not agree with you about the swagger stick, but that is all in fun.

I am quoting now from the copy of this document:

> Our budget estimate for 1961 is for funds to support a 175,000-man Marine Corps. The percentage of our three division-wing teams that may simultaneously be committed to combat and the location, intensity, and duration of the conflict could be such as to properly require a ready Marine Corps of 200,000, 215,000, 234,000, or even more.

Are you quoted correctly?

General SHOUP. Absolutely.

Mr. FLOOD. They told me you were a tough guy. You sound as though you were going to have some guts. That does not always happen up here in that witness chair. You may not be around long. I have told that to admirals and generals around here for 10 years, they never last long. You have been around a long time. Forget about it.

This, I gather, and I heard for years, is the composite thinking of the best brains of the Marine Corps. Even 200,000 is obviously undesirable but is the irreducible minimum that the Marine generals think. I think you are really thinking of something up around 225,000. You have a mission to perform and "the boss" has given you orders, you have 175,000, you are the Commandant, you have three divisions and three wings.

Let me use this term. I think that that is a deliberate, calculated risk as far as the mission of the Marine Corps is concerned. Is that what it is? What do you say? I say it is a calculated risk. You can do it. You told the chairman the other day you can do it, but I am speaking of this year of our Lord 1960, the condition of the world as it is, the fact that the Marines must be a ready force. I say it is a deliberate, calculated risk at the very best. What do you say?

General SHOUP. I think the statement you quoted answers that right there.

Mr. FLOOD. I do, too. I think you said it better than I did.

The percentage of our three division-wing teams that may simultaneously be committed to combat and the location, intensity, and duration of the conflict could be such as to properly require a ready Marine Corps of 200,000, 215,000, 234,000, or even more.

I construe that to mean the Commandant of the Marine Corps and the best combined opinion of the Marine Corps general staff, general officers, is that anything below this, anything below 200,000 is a deliberate, calculated risk at the very best. That is my statement. You tell me this language says as far as you are concerned the same thing, only you say it differently.

General SHOUP. Absolutely. It does not take a very fertile imagination to place the Marines in a position where 234,000 or 250,000 is not enough to keep on fighting and to mobilize and go ahead and continue your combat with the enemy. Whether that is going to happen is something that is a little far afield from all of us.

Mr. FLOOD. You left your crystal ball on the last battlefield you were in, your crystal globe; is that right?

General SHOUP. I left some of my blood there.

Mr. FLOOD. Certainly you did, to find this out, your blood and your sweat and your crystal ball, to find out whether it would ever happen again or not. You know.

The idea of telling the people of this Nation and of the world that this is an adequate and a good budget under all conceivable circumstances and then to have the Marine Corps to a man say while they do not know what is going to happen tomorrow morning and to have the Congress say year after year that we do not believe this, and then to force you to 175,000 men for no other reason, General, than to balance the budget, balance the budget, balance the budget, we will gamble nothing will happen and if it does, we will worry about it when it does with the Marines. That is it. It is an outrage, it is scandalous, to handle the U.S. Marine Corps that way. I believe the people think that way and I believe this Congress thinks that way.

Now, if the Russians read that, they will probably take Alaska Sunday morning after church. I have just said a bad thing according to the new Pentagon orders. Our whole flank is wide open now because of what I said. I have questioned the balance of this power in this budget.

Mr. LAIRD. Will the gentleman yield?
Mr. FLOOD. Yes.

TROOP STRENGTH, 1775 AND 1950

Mr. LAIRD. For my own information, I wonder if I could find out what the Marine Corps recommendation was as far as troop strength was concerned in 1950 prior to Korea when the Marine Corps was down to about 70,000 men.

General SHOUP. I can furnish that for the record.

Mr. FLOOD. You might also find out for me at the same time what was the force strength of the Marines when they were founded in Philadelphia in 1775. It has the same relationship to what I am talking about. Put that the figure in, too. That is only 200 years ago.

(The matter referred to follows:)

Public Law 347, 79th Congress, established for the Marine Corps an enlisted strength of the active list of 100,000. However, Public Law 398 of the 77th Congress authorized the President to increase the Marine Corps to 104,000 enlisted whenever in his judgment a sufficient national emergency existed.

For fiscal year 1950 the Marine Corps desired an end strength of 104,000 enlisted, the total allowable under the law, and 8,000 officers plus 1,994 enlisted and 386 officers on continuous active duty in connection with Marine Corps Reserve matters, for a total strength on active duty of 114,380.

In testifying to the strength approved for inclusion in the President's budget for fiscal year 1950 the following statement was made:

NATIONAL MILITARY ESTABLISHMENT APPROPRIATION BILL FOR 1950

Hearings before the subcommittee of the committee on appropriations, U.S. Senate, 81st Congress, 1st session on H.R. 4146

Page 167, Summary on Marine Corps strength:

"The Marine Corps will have an end strength in fiscal year 1950 of 7,000 officers and 67,395 enlisted men, exclusive of the 6,000 1-year enlistees being trained for billets in the Marine Corps Reserve. These personnel will be allocated as shown in appendix 1. While 55.7 percent of this combined strength is allocated to the operating forces, those forces will be at reduced peacetime allowances and effective only within the limitation on the number of personnel.

"It should no be inferred from the above that there is any lack of readiness on the part of existing Fleet Marine Force units. The contrary is true. Existing units are prepared on very short notice to undertake any assigned task. However, it must be recognized that a considerable number of these units are already committed directly or in general support of missions involving U.S. policy in China and the Mediterranean, and further that there are serious limitations on the scale of operations which peace-strength units can realistically be expected to perform without undue risk."

In 1775 Continental Congress authorized the Marine Corps to recruit sufficient officers and men for one regiment. This strength was computed to be 728 officers and enlisted men. No actual strength is recorded for 1775. The first recorded strength was in February 1776 when the Marine Corps had a total of 200 officers and enlisted men.

Mr. FLOOD. There is no sense in torturing you. I know how you feel. I do not want to see you stick your neck out. I have unintentionally cut the heads off of too many fine officers. I know what you think, what the boys think, and I know what these figures that are handling the budget are going to do about it, and I think the Congress will do it again. As far as I am concerned, I am trying to shove it down their throats until we get a President who will do something about this, no matter who he is. I don't know, but I am going to keep trying until I find someone who is not so worried about the budget that we cannot have a Marine Corps, a Navy, and an Army.

This may be the kind of a situation that reminds me of Clemenceau's words, that this whole problem may be too important to entrust to generals even when they become President. That has happened before in the history of the world. We may be dealing with a subject here, national defense, that is too important for great generals to be concerned about. Clemenceau thought so. This may be beyond generals.

HYDROFOIL SHIP DEVELOPMENT

What about this hydrofoil thing, Skipper? Is there any possibility of this thing skipping around about the fleet with a carrier task force 60, 80, 90 miles an hour?

Admiral BURKE. There is a possibility. This hydrofoil principle might turn out to be very good. Another which might turn out even better is the air-supported craft. One of those two will probably turn out very well. We have one hydrofoil ship in this budget.

Mr. SIKES. How large is that ship?

Admiral BURKE. A little more than a hundred tons.

Mr. FLOOD. They can do 60 to 90, can they not?

Admiral BURKE. The one we are building probably will not, but we may do better after much testing.

Mr. FLOOD. If it were operational, there is no reason why it could not do 60 to 90 and screen a carrier task force, if you had it?

Admiral BURKE. Yes.

Mr. FLOOD. If and when this ever comes out and you still have carriers floating, your ship train would not hold back a carrier task force if you had hydrofoils or two or three of them.

Admiral BURKE. No, sir.

Mr. FORD. Will the gentleman yield?

Mr. FLOOD. Yes.

Mr. FORD. Will this kind of ship operate under adverse ocean conditions?

Admiral BURKE. That is one thing we want to find out—how bad the seas can get before it cannot operate. We do not know this. The Italians have a hydrofoil ferry operating across the Straits of Sicily in pretty bad weather. Hydrofoil ships are much better than the Italians anticipated, which is why we went into it.

Mr. FLOOD. At the end of my examination, Mr. Chairman, I have something that I was going to put in the record last year and did not get in. I would like to put it in this year. It deals with the competency of a certain type of civilian bureaucrat, particularly budget operators, to affect policy—I am not talking about the right to affect money, but policy, with particular reference to the Department of Defense only. I would like to include that as a statement from me at the end. You have heard me go through this for years, and there is no reason for my repeating it.

Mr. Franke, you and I have known each other for a long time. I am glad to see you as Secretary of the Navy, but you are a distinguished accountant of national renown in your profession. That is good.

However, in this room on the first day of these Navy hearings I felt as though I were attending a lecture in a graduate school of the University of Pennsylvania, Wharton School of Business, in semantics and the terminology of accounting. It got so important in this pres-

entation, the style, the method, what was being done, the concept, the budgeting—an excellent statement at a high professional level, but that went on all morning and all afternoon. I began to feel—this is no indictment—I did not hear enough about the Navy; I did not hear enough about ships and men. I did not hear enough about this great organization that you lead.

Of course, you are talking to the Appropriations Committee, not the legislative committee, and this is no chamber of commerce speech. I know you would make a good one. But, at the same time, even here, I want to feel more deeply about this fighting potential, about this Navy. I hope you do not get enmeshed and entrapped in this budget business because of your first love, figures and statistics and accounting.

Secretary FRANKE. Mr. Flood, unfortunately, all budgets turn out in terms of money. But, in my opinion, money is the last thing you think of in preparing a budget. I think the first thing you think of—this is typical of this committee in the 5 years I have been in this room—the first thing you think of is the validity of programs. Programs eventually have to be converted into money, but money is not the starting point. Programs are the starting point.

I did not mean to convey in my statement that I was talking about money alone. I was talking about money as the end result of programs. I am fully aware and have been ever since I have been in the Navy, and also in business, that you start out with programs which eventually have to be evolved into terms of dollars.

Mr. FLOOD. Thank you.

(The document submitted earlier by Mr. Flood follows:)

The competence of the Bureau of the Budget to determine the functions, roles, and missions of any one or all of the military services, what national strategy should be and what forces are required to implement such strategy is seriously questioned. Bureau of Budget employees are essentially educated bookkeepers, unschooled and inexperienced in war, strategy, and the employment of military forces. Their attempts, therefore, to establish policies for such matters as done in their markup of the fiscal year GI budget should be given absolutely no weight. The responsibility of how successfully to fight wars and the types and numbers of forces required to do so are quite clearly the responsibilities of the Secretary of Defense, and the Joint Chiefs of Staff. It is high time that authority to implement such weighty responsibilities be returned to these gentlemen instead of being left in the hands of expert bookkeepers.

Past and present concentration on forces required for massive retaliation against an unlimited target system, the precise location of which is unknown, has, and is, causing the upward spiral in Defense costs. Only with forces such as POLARIS submarines and carriers whose survivability can be assured by mobility and concealment can inevitable retaliation be certain. With adequate numbers of such forces, concentration on a finite target system, relatively small in total number of targets, and above all, stable in numbers because not only essential but vitally so.

When the Navy is providing the Nation with the only force capable of inevitable retaliation in general war, it cannot under any circumstances consider its strategic retaliatory capability collateral to the Air Force. In any case, the Air Force is responsible only for strategic air warfare. From the inception of history, navies always have been strategic forces and employed strategically in war. Missiles have no relation to strategic air power per se for they are merely extensions of the gun. Surely, the expert bookkeepers will permit the Navy to procure and use guns.

Ships at sea are the only unprofitable targets for land-launched missiles, particularly ballistic missiles. Yet, all the so-called strategic capabilities of the Air Force are easy setups for ballistic missile and aircraft attacks. Their strip and airborne alerts at most would be temporary expedients of questionable

effectiveness paid for at great cost. Their fixed and conceptual movable ICBM system will do little more than cause millions of Americans to be killed by drawing fire to the United States. Just what are the retaliatory capabilities of the Air Force which the strategic experts, schooled at war and in the national war colleges, of the Bureau of the Budget seem to see?

In limited war or cold war situations anyone with any combat experience realizes that far more than a "show of force" is required. Such a fallacious wooden-gun concept would not fool anyone, let alone the aggressively schooled Communists.

The land areas of the world constitute only 30 percent of its surface. The 42 nations to which the United States is linked by treaty have a common border now unrestricted; the seas. This is no accident. It should be obvious even to those unschooled in strategy, national objectives, and war, that the attainment of national objectives and the preservance of national security can be had only through free and unrestricted use of these seas. The seas, therefore, are a major instrument of national policy and strategy. The freedom to use them at will and the ability to control their use by others is vital to our national security. The space, nuclear, ballistic missile age has done nothing to change those basic tenets other than to compress the time of delivery of massive destruction weapons. This compression of time increases rather than decreases the vital national need for a strong Navy having much greater emphasis in our total national strategy rather than less.

COST OF INCREASING MARINE CORPS STRENGTH

Mr. FLOOD. General, will you supply for the record how much it will cost to beef up the Marines to 200,000 and bring it in by appropriation and category?

General SHOUP. I can do it now.

Mr. FLOOD. Insert it in the record, please.

(The matter referred to follows:)

Cost of a 200,000-man Marine Corps

The costs presented below are premised upon the following strengths in fiscal year 1961:

Begin	175,000
Average	187,884
End	200,000

All costs relating to the appropriation "Military personnel, Marine Corps" are in budget category I and costs relating to "Operation and maintenance, Marine Corps" and "Operation and maintenance, Navy," are in budget category II.

To provide for a Marine Corps end strength of 200,000, additional new obligational authority would be required as follows:

Budget category and appropriation	Additional new obligational authority over budget request	Total new obligational authority
I. Military personnel, Marine Corps	$34,500,000	$641,500,000
II. Operation and maintenance, Marine Corps	5,470,000	181,470,000
Operation and maintenance, Navy	8,025,000	
Aircraft and facilities	(6,600,000)	805,694,000
Medical care	1,425,000	97,365,000
Total additional costs	47,995,000	

Mr. MAHON. Mr. Ford.

UTILIZATION OF MARINE CORPS MANPOWER

Mr. FORD. Mr. Secretary, Admiral Burke, General Shoup, for as long as I have been on this committee we have heard about various

legislative proposals and other programs in the personnel field which, if enacted into law and established as programs, would result in improved utilization of manpower. Most of the legislation over the years has been enacted to increase pay, improve fringe benefits. As a consequence, we have had an increase in our personnel cost. Up until this year I have failed to see any substantial evidence of a payoff.

An instance of a concrete payoff is the illustration submitted to this committee in fiscal 1961 by the Marine Corps. I think it is best stated in General Shoup's statement to the committee where he says on page 4, "I plan to reactivate two of the six previously deactivated battalion landing teams and to activate a surface-to-air missile battalion to utilize the new HAWK missile."

I take that to mean that with the same overall authorized strength for the Marine Corps of 175,000 in fiscal 1961 that you have in fiscal 1960 you are going to get more troops in combat units. Is that correct?

General SHOUP. Yes, sir.

Mr. FORD. Is this a payoff for this kind of legislation and these kinds of policies that have been inaugurated in the last few years?

General SHOUP. It is partially so, as I believe I stated in that statement. Part of the ability to have more troops in the Fleet Marine Force has come about by our determination and efforts to get 4-year enlistments, for example. Of course, that relates to savings in our training base. It reduces the number of times we have to shuffle people back and forth. It is quite obvious as a pure arithmetic matter if you get a man for 2 years, 25 percent of his time is getting him ready for duty; whereas, if you get him for 4 years, it is about 12½ percent of his time.

In the support area, for example, in our training base we have gained about 6,000 troops principally because of these things related to our increased efficiency relating to replacement of individuals overseas. In other words, we are sending entire battalions now and that, in itself, saves personnel.

PERCENTAGE OF STRENGTH IN MARINE CORPS OPERATING FORCES

Mr. FORD. Last year in the hearings, on page 600, the Marine Corps put in some tabular information showing a comparison of fiscal year 1957 to fiscal year 1960 for operating forces, training forces, support base, transients, patients, and prisoners. Would you bring that data up to date? I am sure from the statement in your prepared text that there will be some significant changes in the chart material which was submitted last year. Will you bring that information up to date for the benefit of the committee?

General SHOUP. Yes, sir.

(The matter referred to follows:)

	Fiscal year 1957		Fiscal year 1960		Fiscal year 1961	
	Number	Percent of total strength	Number	Percent of total strength	Number	Percent of total strength
Operating forces	115,479	57.6	106,371	60.8	113,346	64.8
Training base	47,268	23.5	36,498	20.9	30,537	17.5
Support base	21,742	10.8	18,940	10.8	18,807	10.7
Transients, patients and prisoners	16,372	8.1	13,191	7.5	12,310	7.0
Total, USMC	200,861	100.0	175,000	100.0	175,000	100.0

OBLIGATIONAL AUTHORITY AVAILABLE TO MARINE CORPS

Mr. FORD. Also could you show for the last 5 fiscal years the total obligational authority for Marine Corps personnel year by year?

General SHOUP. Yes, sir.

Mr. FORD. I am certain the cost of a yearly basis will have gone up for many reasons. Nevertheless, that is justified if we get a payoff in what you are going to do or are planning to do in 1961. I can justify a higher cost if we get results.

(The matter referred to follows:)

Obligational authority available to the Marine Corps by apportionment

Fiscal year	Obligational authority	Strength	
		End	Average
1956	$613,700,000	200,780	200,735
1957	625,100,000	200,000	200,087
1958	609,149,000	188,000	193,828
1959	632,296,000	175,000	185,083
1960	611,457,000	175,000	175,000

MANNING LEVELS IN FLEET UNITS

Mr. FORD. Mr. Secretary, in your statement, on page 7, you say, and I quote:

As a result of this reduction—

you are talking about the 11,000 reduction in personnel—

some of the older ships of the Navy will be laid up and there will be a slight improvement in the manning level of the remaining fleet units.

Last year it was testified that the manning level of the fleet would be 81.2 for fiscal 1960. What is the expected manning level in fiscal 1961?

Admiral BURKE. 81.5, sir.

Mr. FORD. I just looked at some figures in one of the justification books for "Military personnel, Navy." It shows the expenditure figures, I believe, in this category for the Navy of fiscal 1959 as $2,420 million; for fiscal 1960, estimated, $2,476 million; for fiscal 1961, $2,528 million. You have a higher cost for personnel with fewer personnel. I do not see any improvement in the manning level of ships at sea.

Admiral BURKE. We will go from 81.2 to 81.5. The big reason we do not have an increase in manning level, and have more ships, is that the new ships take more men than the old ships. A POLARIS submarine has two crews, 200 men total. The old submarines had 80 to 90. New carriers require more men. New destroyers, because of their missile batteries, must have larger crews. We also have to have, because of a nuclear power program and other highly technical programs, a good many more people in school. It takes a long time to train men for nuclear power. Our school population has gone up due to increased use of missiles, nuclear power, and other technological advances.

Mr. RILEY. Will the gentleman yield?

Mr. FORD. Yes.

Mr. RILEY. Will that manning level be after the proposed reduction in the number of ships?

Admiral BURKE. That is correct, sir.

Mr. RILEY. We will really have more people on board fewer ships?

Admiral BURKE. We are going down in ships now, and that will improve the manning level from 81.2 to 81.5, as I said.

Mr. FORD. Are you telling the committee, Admiral Burke, that the circumstances in this area are different for the Navy than they are in the Marine Corps?

Admiral BURKE. Yes, sir; because we deal more with equipment. We have taken more people from the Shore Establishment in the last year and we will take more next year, so that our sea to shore ratio will be greater next year than it is now. It is greater now than it was last year. In other words, there are more people at sea than there are ashore. There will be an increase in people at sea and a decrease in people ashore.

Mr. FORD. You have fewer people, you have higher personnel costs, your manning levels have not gone up significantly, you have fewer ships. I do not see the payoff yet.

Admiral BURKE. The payoff comes in increased shipping-over rates, increased skills, increased performance. If you have a ship, the only measure of efficiency of that ship is how well it can perform. With men who are better trained, more permanent, and more skilled, a ship will perform better. That is what is happening. Our personnel are much more effective now per man than they were a year ago and are much better than they were 2 or 3 years ago.

Mr. FORD. Do you have any concrete evidence of it? I can see it in the Marine Corps. Is it so intangible in the Navy that you cannot put it in black and white?

Admiral BURKE. We can put it in black and white, the shipping-over rates, the reenlistment rate is about 40 percent we expect in 1961 and 2 years ago they were about 34 overall. Mostly, it is in increased capability.

Mr. FORD. In other words, you have a better Navy?

Admiral BURKE. We have a better Navy and it is a much more complicated Navy. You cannot operate a POLARIS type submarine, or a jet aircraft or a missile from a destroyer with men who are not highly skilled. They have to be good. All of our missiles, all of our operations, are done by Navy men and women, our own people. They are not done on contract. We do not use civilians.

Mr. FORD. Just for the benefit of the record, could you insert the trend year by year for the last 4 or 5 years of your Navy personnel, your military personnel costs overall, your strength figures overall, the ratio of ship to shore over a period of time, your reenlistment rate trends?

Admiral BURKE. Dependent trends also, because dependents cost a lot.

Mr. FORD. I want the record complete, I am not trying to gild it one way or the other. I would like it as well laid out as we can, including such trends as time lost for disciplinary reasons, your time picked up because of an improved health factor in the Navy, which I understand is a significant one.

Admiral BURKE. Yes, sir.

Mr. FORD. I am concerned because in the case of the Marine Corps I see something concrete as a result of legislation, personnel expenditures, and policies. I have not seen it as well illustrated in the case of the Navy.

Admiral BURKE. I do not think we can illustrate it as well, sir; because we include the cost of ships and aircraft, which take a larger portion of the budget now than they used to.

Secretary FRANKE. Mr. Ford, one of the reasons for the increase, of course, is the increasing cost of proficiency pay.

Mr. FORD. That is another matter I want to get into with the personnel people.

Secretary FRANKE. That has gone up. In fiscal 1959 it was $1.6 million; for fiscal 1960, $8.2 million; and for 1961, $18.3 million, estimated.

(The matter referred to follows:)

Overall strength

The average number of Navy active duty military personnel in fiscal year 1957 was 675,795; in fiscal year 1958 the number was 649,674; and in fiscal year 1959 the number was 636,393. It is estimated that the average number of military personnel on active duty in fiscal year 1960 will be 619,649 and in fiscal year 1961 it is planned to have an average number of 618,959.

Overall costs.

The overall costs for the appropriation "Military personnel, Navy," for fiscal year 1957 through the budget year, fiscal year 1961, are as follows:

1957	[1] $2,437,164
1958	2,469,922
1959	2,555,618
1960	2,551,700
1961	2,588,000

[1] Costs are in thousands.

Navy dependents trend

The number of Navy dependents has been on a continuing upward trend. In fiscal year 1958 there was a ratio of 1.05 dependents for each member of the naval service. The ratio of dependents in fiscal year 1960 has increased to 1.15 dependents per member. This represents an increase of 10 percent in 2 years.

Operating forces (ships, squadrons, and units under fleet commanders)

The assignment of personnel to the operating forces and Shore Establishment as shown in the budget justification book compare actual figures in the past to

planned figures in the future. In order to make more logical comparisons, the following personnel strength and assignment figures are related to plans, both past and future.

Planner personnel allocations, Navy

	Fiscal year—				
	1957	1958	1959	1960	1961
Operating force (fleet)	388,422	364,287	354,792	354,538	355,246
Military command operating force				[1] 28,285	[1] 28,644
Total operating force	388,422	364,287	354,792	382,823	383,890
Support	123,801	122,987	123,717	98,455	97,882
Training	106,000	99,942	98,284	92,856	92,935
Officer candidate	6,500	6,300	6,144	6,000	6,000
Transients, patients, and prisoners (nonavailables)	50,277	51,484	47,063	38,866	38,293
Total	675,000	645,000	630,000	619,000	619,000

[1] Activities under direct command of fleet commanders, not previously separately accounted for.

Between fiscal years 1957 and 1961, the relative percentage of total personnel assigned to the operating forces has significantly increased while the percentages of total personnel assigned to support and training have decreased. Part of this increase in personnel assigned to the operating forces is due to the transfer in accounting for certain direct fleet support activities to the fleet commanders; the remainder of the increase is due to the assignment of greater proportions of personnel to the actual fleet units.

It is true that overall personnel costs are rising while total personnel assigned is decreasing. We are retaining more personnel in a career status, and these personnel are acquiring more dependents. While this does cost us more money, we have a much more effective operating force. Per capita costs will increase as career strength increases.

While personnel and other costs are continuing to increase, our destructive capability per man increases at a vastly higher rate. This is the payoff in increased personnel costs.

We have previously worked with submarines with a prime mission to attack shipping targets with torpedoes. When we speak of submarines now we are dealing with units which can deliver nuclear attacks on land targets over a thousand miles away.

Our guided missile cruisers and destroyers have extended their weapons ranges from thousands of yards to hundreds of miles. Similarly a single carrier plane can drop a more potent weapon than all the bombs dropped by our aircraft in the Pacific during World War II.

As we lay up older ships and bring new ones into the fleet, we buy a requirement for more and better trained people. Despite the potential increased costs, we must retain more and more personnel in a career status. For instance, it takes up to 3 years to train personnel to man some of our weapons systems. If we cannot retain these expensively trained personnel, we cannot expect to fight effectively. However, the increased destructive capability we are buying will be well worth the increased costs of building up career strength.

REENLISTMENT RATES

The first term reenlistment rate has increased steadily from 9 percent for fiscal year 1955 to 23.4 percent for fiscal year 1959. It is felt this increase in rate is due to the incentives offered by the Navy, such as priority for training and proficiency pay, preference for reassignment when possible and improved sea-shore rotation. In addition, the attractiveness of a military career was greatly increased by the military pay legislation enacted by Congress in 1958, which provided for a military pay raise and the addition of new pay grades E–8 and E–9 and proficiency pay.

In the career regulars (individuals serving on active duty for a second or subsequent term of service in the Regular Navy) the losses continue to be small and the Navy has been able to attain a measure of stability among this group.

The reenlistment rate trend since fiscal year 1955 is shown in the following table:

Fiscal year	1st term reenlistment		Career reenlistment	
	Number	Percent	Number	Percent
1955	14,278	9.0	10,238	73.2
1956	15,452	11.5	42,982	94.3
1957	10,042	15.6	39,823	85.8
1958	13,957	22.6	25,493	89.0
1959	18,149	23.4	13,595	90.1
1960 (estimated)	18,838	23.7	17,334	92.8
1961 (estimated)	16,775	25.6	24,455	87.2

Improved health and discipline

Time picked up because of improved health is significant. The noneffective rate (number per thousand on the sick list) has decreased from 15 in 1953 to 13.6 in 1957, 12.5 in 1958, and 11.8 in 1959. The decrease of 0.7 from 1958 to 1959 resulted in approximately 445 man-years gained for productive work.

Over the past few years the trend has been one of decrease in the amount of lost time resulting from disciplinary reasons. For example, fiscal year 1959 saw the following reductions: 16-percent decrease in major unauthorized absence offenses (e.g., 3 days or more), 22½-percent decrease in courts-martial, and 19-percent decrease in confinements in brigs and retraining commands. Among other things, this trend is related to (1) continued emphasis on requirement to confine personnel only on an "absolute necessity" basis, (2) continued emphasis on improved personnel management with consequent reduction in the number of disciplinary actions and hence resulting confinements, and (3) increased emphasis on the need for early elimination of offense-prone individuals who either will not or can not conform to the requirements of the service.

Travel time and periods of temporary duty under instruction between permanent duty stations included in the computation of T.P. & P. (transients, patients, and prisoners (nonavailables)) have not changed significantly in recent years.

In summary, the improvement in the health and disciplinary areas has resulted in a net decrease in T.P. & P. (nonavailables) from 7.4 percent of total naval personnel in fiscal year 1957 to 6.2 percent planned for fiscal year 1961.

CIVILIAN PERSONNEL

Mr. FORD. Admiral Burke, in your statement, on page 12, you said this, and I quote:

The number of civilian personnel has been reduced by 53,500—

this is in a 5-year period—

while the foregoing reductions were made in the interest of improved efficiency and economy, the total annual salary of the remaining civilian personnel alone increased by $210 million.

I do not want you to put it in here now but can you put in the record why those costs have gone up, pay increases and other things?

Admiral BURKE. Yes, sir.

(The matter referred to follows:)

Civilian reduction and salaries, fiscal year 1955 through fiscal year 1959

	Civilians employed	Total salaries
End of fiscal year—		
1955	410,564	$1,782,278,511
1956	394,669	1,884,445,981
1957	389,717	1,916,361,372
1958	363,729	1,872,556,377
1959	357,108	1,992,290,575
Net reduction	53,456	
Net increase		210,012,064

FACTORS CONTRIBUTING TO PAY INCREASE

a. Graded employees: Two pay increases—summer 1955, 10 percent; summer 1958, 10 percent. Increase in average grade level of 1 grade.

b. Ungraded: Mean increase estimated to be 25 percent; varies with area and the occupation.

DETERRENT FORCES

Mr. FORD. Admiral Burke, last year during your appearance before the committee I asked a number of questions about the capability of our retaliatory or deterrent forces. You made a number of very forthright and, I think, very helpful comments. For example, I asked, and I quote:

Are you convinced that at the present time our combined retaliatory deterrent forces are sufficient with ample, liberal safety factors to hit and destroy all Soviet military targets?

Your answer was, "Yes, sir." Subsequently you made a modification or reservation, which was brought out—and I think properly explained. On page 591 of the hearings last year, you said, and I quote:

Right now I think there is nothing Russia can do to prevent her from being destroyed.

Later you said on the same page, and I quote:

What we can destroy would be the ability of Russia to continue a war. We would break her back.

On the same page, same hearings, you said:

You would not strike every military target but you would strike enough of them to prevent Russia from recovering. You would break her back.

Then in response to a question by Mr. Mahon, on page 594 of the hearings of last year, you said:

I think we do have too much retailatory power and I think that we should put more money into limited capability.

Would you subscribe to those statements made last year this year?

Admiral BURKE. Yes, sir.

Mr. FORD. To summarize, then, you think we have this ability to——

Admiral BURKE. We have the ability to destroy Russia, no matter what she does.

Mr. FORD. Do you still feel that we may be overconcentrating in retaliatory or deterrent forces?

Admiral BURKE. Yes, sir; although the balance is getting better, it is much better.

Mr. FORD. If it is true that we are perhaps overconcentrating in retaliatory power, even though the balance is swinging toward a greater concentration on limited war, why does the Navy then recommend a substantially larger POLARIS missile system?

Admiral BURKE. Because it is a nearly invulnerable system, and no other system relying upon fixed bases has that degree of invulnerability. The reason for this is that when ICBM's become perfected, then any fixed base in the United States or any other place can be hit.

That means that if you rely solely upon capability from a fixed base, you have to have enough of that capability so that you can absorb the initial blow and still have enough remaining to retaliate. If the enemy can strike a blow and cannot knock out your retaliatory capability, you do not have to have nearly as much.

The type of retaliatory power required by the United States is gradually shifting from bombers to missiles. It is gradually shifting from fixed bases to mobile launching facilities in unknown locations, as for example, to bases at sea, to POLARIS submarines at sea, and mobile launchers ashore.

Mr. FORD. You consider the POLARIS missile system a part of our strategic retaliatory or deterrent power?

Admiral BURKE. Yes, sir; it is part of the deterrent power of the United States.

Mr. FORD. Not part of our limited war capability?

Admiral BURKE. That is correct, sir.

Mr. FORD. You do not feel the Navy's advocacy of a greater POLARIS missile system is contrary to the philosophy that you think we are overconcentrating in the deterrent field?

Admiral BURKE. No, sir; I think the type of deterrent power will shift to mobile, more nearly invulnerable systems. The POLARIS system is a more nearly invulnerable system.

Mr. FORD. You are advocating it because it is a better weapon in the deterrent stockpile?

Admiral BURKE. That is correct, sir.

Mr. SIKES. Will the gentleman yield?

Mr. FORD. Yes.

Mr. SIKES. What will be the effect, on this situation of deterrent power, of the mandate to relinquish the bases in Morocco and possibly in other north African countries?

Admiral BURKE. It will reduce it somewhat.

Mr. SIKES. Reduce what?

Admiral BURKE. Reduce the capability of manner aircraft a little bit. There are other ways of doing the job.

Mr. SIKES. Are we prepared to do the job by the other means now?

Admiral BURKE. Yes, sir. It makes the job more difficult to do. Each time we lose a base, the job becomes a little more difficult, your plans become more difficult, more restricted. You lose a little bit of flexibility.

NAVY RESOURCES DEVOTED TO POLARIS

Mr. FORD. How much of the Navy's resources in fiscal 1961 will be devoted to the POLARIS missile system, both in dollars and in manpower?

Admiral BURKE. I can submit it for the record.

Mr. FORD. Very well.

(The matter referred to follows:)

In direct support of the POLARIS program we have in the budget $952.212 million. The number of naval personnel committed to the direct support of the program is 3,743.

Mr. FORD. You do not feel that the Navy's contribution in this area is detrimental to its deep concern for a greater limited war capability?

Admiral BURKE. I think the only invulnerable system that the United States can produce for retaliation is the POLARIS system. I think it is essential for the security of the United States that the United States have a POLARIS system. We must have launchers in unknown locations, which cannot be destroyed by missile attack. POLARIS will meet this need. It is true that the cost of POLARIS comes out of the Navy budget. It is true that by spending money on the POLARIS system, we can spend less money on other things assuming we would have received the funds in any case, which we might not have done.

Programs for weapons systems and for other needs are closely examined. Perhaps if we did not have POLARIS, we would not have received the money for other naval uses.

The point is that the POLARIS system is necessary for the security of the United States because it is an invulnerable system—when I say invulnerable, I mean nearly invulnerable. There are, of course, methods of destroying any target, but you cannot destroy the whole system simultaneously. That is what I mean by saying the system is invulnerable.

The system is needed in order to prevent being blackmailed by Russia when she says, "We will strike you and destroy your capability and you cannot do harm to us." We can do harm to her no matter what she does, with POLARIS submarines.

Mr. FORD. Are there any people in the Navy who think that the Navy might be better off for its overall responsibility by letting somebody else, or in some other way, fund POLARIS so that the Navy could get greater funds and put greater emphasis on a limited war capability?

Admiral BURKE. There may be a few. There are many fewer now than there were a couple years ago when we first went into this concept. Whenever you get a new concept or a new thing you want to buy, there are always people in the Navy and in the other services, too, who say, "Let us not buy this out of our money, let us get the money from somebody else and use this money to buy this." It never works. If something is needed, you have to get it in your own funds.

Mr. FORD. If you are convinced it is necessary to the overall——

Admiral BURKE. I am, sir; and that is what we have done.

BASE CLOSINGS, 1960 AND 1961

Mr. FORD. Could we have for the record the number of bases you have closed in fiscal 1960, those you plan to close in this current fiscal year, as well as whatever you plan to close in fiscal 1961.

(The matter referred to follows:)

DISESTABLISHMENT OF ACTIVITIES FISCAL YEARS 1960 AND 1961

Seventeen activities have already been disestablished in fiscal year 1960. Two additional activities have been approved for disestablishment during the remainder of fiscal 1960 but have not yet been closed:

MSTS NORPAC Subarea.
NAD Fort Mifflin, Pa.

The activities approved for disestablishment in fiscal year 1961 are:

Retraining Command, Camp Elliott, Calif.
Retraining Command, Camp Langdon, N.H.
Reserve Fleet Group, New London.
Naval Auxiliary Air Station, Brown Field, Chula Vista, Calif.
Naval Air Facility, Annapolis, Md.
Naval Air Station, Anacostia. (Fixed wing flight operations only.)

SHIPBUILDING FUNDED TO COMPLETION

Mr. FORD. This funding to completion program, Mr. Secretary, I think is a good one. Why did you decide to do it in fiscal 1961?

Secretary FRANKE. I think the principal reason we decided to do it in fiscal 1961 is because the problem became more apparent. In other words, we are building a lot of new types of ships and we began to realize the difficulty of determining fully in advance what these costs were going to be. We realized then that this solution, having to cancel ships, was not very satisfactory to anyone. It certainly is not satisfactory to us, it is not satisfactory to the Congress. This is a means of developing some kind of a better system which would make it possible for us to go ahead with the shipbuilding program which is approved by the Congress.

Mr. MAHON. Will the gentleman yield?

Mr. FORD. Yes.

Mr. MAHON. Would it be fair to say that the money gap of more than $800 million was the thing that brought you to this new approach?

Secretary FRANKE. It was a combination of a number of things, Mr. Chairman. It was partly that. It was partly the fact that all of a sudden it caught up with us. We probably should have requested this years ago.

Mr. FORD. It puts a terrific impact on your fiscal 1961 program, however.

Secretary FRANKE. It does, indeed.

Mr. FORD. I am not so sure that it is right to do it all in one year. Was there ever any alternative suggested to do it over a period of time?

Secretary FRANKE. No, and I do not know how you divide this into sections. It seems to me you have to meet the full problem. I do not see how we can meet it by degrees.

Mr. FORD. It certainly complicates your program at the present time and I think, at least in my mind, puts an unfair impact right now on the program.

Secretary FRANKE. I am sure that is right and, on the other hand, once we get this back of us, if the Congress approves it, we will have clear sailing for the future.

MODERNIZATION OF FLEET MARINE FORCES

Mr. FORD. General Shoup, in the Secretary's statement on page 13 he talks about the annual increment in the modernization of the Fleet Marine Forces. He indicates that in fiscal 1961 we will have the second of four annual increment programed to equip the Marine Corps with a new 7.62-millimeter weapons family. Does the Marine Corps have a mobilization reserve of its own?

General SHOUP. Of equipment?

Mr. FORD. Yes.

General SHOUP. Yes, sir.

Mr. FORD. Is it comparable to what we think of when we talk about mobilization reserve for the Army, for example?

General SHOUP. No, sir, not to that extent. Our requirement is to be ready to go now and to continue to fight, and that makes the equipments and supplies we have to have readily available at all times in a sense mobilization reserve and it is so considered.

(Statement off the record.)

General SHOUP. It is all based on how many months we actually think we would be in combat with our division-wing teams in accordance with the war plan and the fact that we have this limited war—that is the term we use—requirement. It gives us what we believe we could fight with up until P-Day or the day in which industry is able to get to us with like items.

In most of our items, they being generally common to the Armed Forces, that would be something like 9 to 10 months.

Mr. FORD. Is there a general improvement in your mobilization reserve picture?

General SHOUP. I think this year, for example, about 8 percent is going to increase our mobilization reserve.

Mr. FORD. That is in total amount?

General SHOUP. Yes.

Mr. FORD. What about modernity?

General SHOUP. Do you mean in terms of percent of dollars?

Mr. FORD. I do not quite know how to express it. You could probably express it better than I. You must be in the process of modernization.

General SHOUP. That is right. We have the 7.2 rifle, the HAWK battalion, and some of the other items that are coming into our equipments, especially in the electronics communication field.

MODERN WEAPONS TO BE PROCURED WITH 1961 FUNDS

Mr. FORD. Could you list for the record some of the major modern weapons you are procuring out of the fiscal year 1961 funds for the Marine Corps?

General SHOUP. Yes.

Mr. FORD. You do not have to put in the number of each, but the kind of items included in the modernization program.

General SHOUP. Yes.

(The requested information follows:)

MAJOR MODERN WEAPONS AND EQUIPMENT CONTAINED IN THE FISCAL YEAR 1961 PROCUREMENT, MARINE CORPS BUDGET

1. 7.62-mm. (NATO) weapons (includes rifle, machineguns, and ammunition).
2. Davy Crockett weapon system.
3. HAWK surface-to-air missiles and ground equipment.
4. REDEYE missiles.
5. HONEST JOHN rockets.
6. Improved radar equipment.
7. Long-range radio relay equipment.
8. Special countermeasures equipment.
9. Paraballoon antenna for radar equipment.
10. Amphibious trucks.
11. Aluminum landing mat for temporary airfields.

Mr. FORD. What is your feeling, General Shoup, about the capability of our retaliatory or deterrent forces? Do we have enough, under wartime conditions, to do the job?

General SHOUP. I do not think I am qualified to make a categorical statement in that field. If someone could tell me what will be left when the enemy makes his strike then I suppose I could. I would rather not attempt to answer. As has been pointed out here, if we have sufficient locations and sufficient mobility so that the enemy does not get all our retaliatory power, then we will have some percentage left to send back at him. Naturally, that includes bombers that will be in the air if we can get warning those that come from stations not struck by the enemy, and all of our missile sites and everything else is to be added into this. It is a question and a hope that a lot would be left to have sufficient retaliatory power to cause the enemy to desist.

TROOP TRANSPORT AND REFUELER

Mr. FORD. What is the long-range, inflight refueler and troop transport which is a modification of the Air Force's C–130?

General SHOUP. That airplane will give us the ability to refuel in flight and, in addition, it can be used for intratheater transport not only of personnel but material.

Mr. FORD. How many are being bought in the fiscal year 1961?

General SHOUP. I do not know.

Admiral BEARDSLEY. Twenty.

Mr. FORD. Is this a first buy?

Admiral ENSEY. No, sir. Ten last year, four the year before, and two the year before that. That makes a total of 16.

General SHOUP. We have 16 coming and how many will actually be purchased this year, I do not know.

Mr. FORD. Is this a long-range troop transport type?

General SHOUP. Yes.

Mr. FORD. Particularly with the inflight refueling capability?

General SHOUP. Yes. It is a combination that can be used for either.

Mr. FORD. For either short-range troop transport, or long range?

General SHOUP. I really meant to say for refueling, or troop and cargo transport. The number booked for this year is 20.

Mr. FORD. What type of aircraft will it replace, or is it a new addition to your inventory?

General SHOUP. It is in effect a new addition as far as the refueling capability is concerned, but our transport type aircraft we have are those related to intra-area transportation as against long-range transportation. The type we have now are old R–4–Q and R5D, and we carry a certain number of troops, 1,000, and a certain number, 2,000, but that is it. They are nothing like the C–130.

Mr. FORD. Is this the kind of aircraft that would be quite helpful to you in a Lebanon type operation?

General SHOUP. Yes. These types of aircraft are available for carrying cargo or men. I had my marines in one in Okinawa, in an Air Force plane, and we had 234 fully equipped marines.

Mr. FORD. And the planes that you are buying would have a comparable capability?

General SHOUP. It is the same plane. It can be used for all of these purposes.

OPERATING AIRCRAFT

Mr. FORD. For the record I think that we ought to have the number of operating aircraft set forth such as we have had in previous years, for example, on page 600 of last year's hearings.

Admiral BURKE. Yes.

(The requested information follows:)

Table of Navy and Marine Corps operating aircraft, modernity and percentage jet aircraft, yearend

	Fiscal year 1959	Fiscal year 1960	Fiscal year 1961
Operating aircraft (Navy and Marine Corps)	7,562	[1] 6,852	6,791
Modernity combat aircraft (percent)	63	68	74
Percent jet	43	45	44

[1] Planned strength fiscal year 1960 budget was 7,200.

Mr. FORD. We have read in the papers some stories about security problems in the construction or maintenance of several of your submarines. Perhaps you should discuss this off the record. I think this committee ought to know what the problem is and how serious it is.

Secretary FRANKE. I would like to go off the record.

(Discussion off the record.)

OBLIGATIONAL AUTHORITY, EXPENDITURES, AND BALANCES

Mr. FORD. Can we have for comparative purposes your new obligational authority requested over the past 4 years, your expenditures on an annual year basis, and the unexpended balances at the end of the fiscal year in each instance?

Secretary FRANKE. Yes.

(The requested information follows:)

New obligational authority, expenditures, and unexpended balances at end of fiscal years 1957, 1958, 1959, 1960

[In millions of dollars]

Fiscal year	New obligational authority	Expenditures	Unexpended balance at end of year
1957 [1]	10,478	10,398	11,838
1958 [1]	10,696	10,906	11,392
1959	11,980	11,728	11,379
1960	11,313	11,571	10,979

[1] Includes ship stores profits, Navy.

Mr. MAHON. Mr. Ostertag.

Mr. OSTERTAG. Mr. Secretary, I, for one, was very pleased when you accepted the position of Secretary of the Navy. I know, by virtue of your past record and experience, that you are going to do an outstanding job.

Admiral Burke, of course, our respect and admiration for your leadership in the Navy, and as a member of the Chiefs of Staff, is one of pride, and we know that you are going to ably exercise the leadership that goes with that important branch of our Military Establishment.

MISSION OF THE NAVY

Earlier, mention was made as to the mission of the Navy. I believe that you referred to the fact that the primary mission is that of control of the seas.

Admiral BURKE. Yes.

Mr. OSTERTAG. That does not necessarily mean seapower, but it means airpower as well, is that correct?

Admiral BURKE. Yes.

Mr. OSTERTAG. I believe it has been stated, and I am sure I am correct, that our Navy is the greatest navy in the world and is not second in any sense of the word to any military operation of that kind?

Admiral BURKE. That is correct.

SOVIET SUBMARINE THREAT

Mr. OSTERTAG. There has been some concern as to Russia's development of certain phases of seapower; namely, the submarine.

Do you regard the submarine menace as one that might to some extent threaten to overcome our position and our ability to maintain control of the seas?

Admiral BURKE. It is one of several threats. We have to be able to defeat the threat. We are making quite a bit of progress toward that end. We are not satisfied at all with the progress we have made. But we have made considerable progress in the last 2 or 3 years, particularly in the last year, sir.

Mr. OSTERTAG. The progress you are referring to is that of your capability of meeting that threat?

Admiral BURKE. Yes.

Mr. OSTERTAG. Through, perhaps, the greatest development of antisubmarine warfare capabilities?

Admiral BURKE. Right. We have much better sonars now than we had a couple of years ago. We have better attack weapons. We have better shore-based detection equipment. Our equipment all along the line is getting much better. When we get enough of that equipment at sea we will be able to show considerable improvement.

Mr. OSTERTAG. Much is said from time to time about a gap, be it called a deterrent gap, a missile gap, or some other form of gap. It seems to be the application of a limited comparison of deterrent power or retaliatory power or of our position in the world.

Would you say the Russians are developing to the point where they are closing the gap, so to speak, in control of the seas?

Admiral BURKE. Mr. Khrushchev has come to the realization that seapower is very important to him. That is the reason that they built their submarines, to threaten our control of the seas, to deny us the use of the seas, which is important to them. In addition to their tremendous number of submarines, they have made, in the last year, a great deal of progress with other types of ships.

They are now putting guided missiles on destroyers. We know that they have guided missiles on destroyers. They are pretty good. We know that they are working very hard on an amphibious capability. So we probably will see within the next couple of years the Russians turning more and more to missile ships as we did a few years ago.

Mr. OSTERTAG. In the field of modernization and technological development and improved weapons, would you say that we are weaker today, or stronger today, than we have been in the past in the field of seapower?

Admiral BURKE. We are stronger. The Russians are stronger, too, so relatively we are about the same as we were last year.

Mr. OSTERTAG. Is the Navy's program taking into account manpower, new weapons, ship construction, and all of the facets of it, including antisubmarine warfare? Would you say that as this budget has been presented, it is in reasonable balance?

Admiral BURKE. It is the best balance we could get. We worked harder on this budget than we ever worked on any budget before. We have had every senior that is in the Navy Department working on this budget. We have had severe examinations by the Department of Defense and by the Bureau of the Budget. This is in the best balance we can get, I think, within the funds made available.

Mr. OSTERTAG. I believe the Secretary of Defense, Mr. Gates, pointed out that in the overall budget, in the overall picture of our defense requirements this year, the costs for personnel and maintenance constituted approximately $22 billion out of a total of, let us say roughly, $40 billion.

Would you say that the Navy's costs for personnel and maintenance as compared with the Navy's overall budget of nearly $12 billion is somewhat in line with that general ratio?

Admiral BURKE. Yes. We can put the exact figures in the record. Generally it is true.

Mr. OSTERTAG. In other words, the Navy is pretty much in line with the general picture of costs and balance?

Admiral BURKE. Yes.

Mr. OSTERTAG. I believe the Navy's budget is approximately at the level of last year, or slightly higher, as compared with the other services.

Secretary FRANKE. Slightly higher.

Mr. OSTERTAG. What is the percentage increase, Mr. Secretary, with regard to materials, is it higher insofar as your requirements are concerned? Personnel, of course, is higher from the standpoint of costs. In other words, it costs you more money today for the same number of men that you had last year?

Secretary FRANKE. That is right, and the same thing is true of materials.

Mr. OSTERTAG. So to a certain extent our costs are higher and what we get for our dollar is less?

Secretary FRANKE. That is correct.

Mr. OSTERTAG. In your statement, Admiral Burke, you referred to the picture of fighting in a certain territory such as the Middle East and north Africa in which our Navy operates, and I might point out to you that it was my privilege as a member of this committee to visit our bases in Spain and north Africa, particularly in Morocco. I visited your base in Rota and also Port Lyautey. You mentioned in your statement that Morocco requires that we abandon, or relinquish, our bases there. Our budget this year is not related to that in any sense, is it?

Admiral BURKE. No, sir.

Mr. OSTERTAG. I shall not raise any question with regard to future plans, or where that leaves us, but I am aware of the value of Port Lyautey as far as your naval operations are concerned.

I might say in regard to the Marines particularly—although the naval personnel may likewise be involved in this operation—I think it is worthy of note that while I was in Port Lyautey I learned that our Marine personnel, and possibly others, are carrying on a program of voluntarily contributing a certain amount, a small amount each month, out of their pay to provide education and foster homes for orphaned Arab children. I believe, from what I could learn, that that spirit, that good will has done much to create a good feeling among the people of that country toward the American military and the American philosophy and purposes. That was not done in any mandatory way it was a voluntary contribution made monthly by our servicemen. I, for one, want to pay tribute to the Marines and the Navy because the Navy, I believe, is involved in it to some degree.

That is all that I have, Mr. Chairman.

Mr. MAHON. Mr. Laird.

Mr. LAIRD. Mr. Chairman, if it is all right with you, I will yield to Mr. Lipscomb, who will not be able to be here this afternoon because of another subcommittee meeting.

Mr. MAHON. Certainly.

FUNDS REQUIRED FOR MAXIMUM DEVELOPMENT OF ANTISUBMARINE WARFARE PROGRAM

Mr. LIPSCOMB. Admiral Burke, you stated in your statement, that you are giving the antisubmarine warfare program the highest priority, is that correct?

Admiral BURKE. That is correct.

Mr. LIPSCOMB. Also in your statement you state the Navy's concern over the antisubmarine warfare program and say you are funding it to the maximum within your resources.

Admiral BURKE. That is correct, sir.

Mr. LIPSCOMB. Have you a list, or could you give to us a list of what additional items you would need, or what you would need in the way of appropriations to develop this program to the maximum, not considering the fact that you are limited by resources?

Admiral BURKE. Yes; I think we submitted that list under Mr. Mahon's questioning, but I will check, and if it is not complete I will make sure it is.

(The matter referred to appears at p. 74.)

Mr. LIPSCOMB. I do not want to duplicate anything.

In your statement you indicate that the funds gained in building the CVA with conventional rather than nuclear power have been applied, in this budget we are working on, to the procurement of other badly needed ships, aircraft, and missiles for the Navy.

SAVINGS FROM CONVENTIONAL POWER FOR CARRIER

Can you indicate what ships those are that the $130 million is being applied to?

Admiral BURKE. No, sir; where the specific funds went we cannot readily tell. The reason is, it is like a stream of water from a brook going into the river, it loses its identity once it gets into the river.

Mr. LIPSCOMB. I got the impression when I was discussing the matter with Secretary Gates that the $130 million proposed savings on this conventional aircraft carrier was going to be applied to important items in the antisubmarine warfare program.

Admiral BURKE. The antisubmarine warfare program is a very important program and was given every emphasis. Exactly where the $130 million went, cannot be traced.

I do not think I misconstrued his testimony.

Mr. LIPSCOMB. Do you include all ships in other items as antisubmarine warfare now?

Admiral BURKE. No, sir; all destroyers are antisubmarine warfare ships and attack submarines are used primarily for antisubmarine warfare. That is why they are being built.

Mr. LIPSCOMB. So there is no way we can determine whether or not that money went into the antisubmarine warfare program?

Admiral BURKE. We never actually had the money. We were told to bring our overall program down. It was in that program that we made adjustments.

Mr. LIPSCOMB. You did not actually reduce your program. You reduced your costs by getting a conventional carrier, and this indicates you took the $130 million and applied it to other ships.

Admiral BURKE. Not only just that. We put much of our money into procurement, but we also reduced manpower during the same process. We reduced the number of ships and reduced our maintenance and operations to get money for the procurement. All that money went into the procurement of ships, aircraft, missiles, and research. A good deal of it went into antisubmarine warfare because that is where the emphasis is, but you cannot identify the individual places where it went.

Secretary FRANKE. There is no one point where the Secretary of Defense said, "Take $130 million off here and put it over there." There was a total series of long discussions with the Secretary of Defense. What really happened was over a period of time these dollars went back into the Navy budget on an overall basis. I tried yesterday to see whether we could identify the individual components of $130 million, and it cannot be done.

Admiral BURKE. In addition to that, I will say that our request was greater than what we finally ended up with, so we were reducing the overall budget at the same time.

HOSPITAL AT LONG BEACH, CALIF.

Mr. LIPSCOMB. I realize that military construction comes before another committee, but I would like to ask a question in regard to military construction.

During the recess of Congress I had the opportunity to visit the Long Beach Naval Base, along with my colleague, Mr. Laird.

Now, Mr. Secretary, have you had a chance to review the critical nature of their hospital facilities in that area?

Secretary FRANKE. I have not been in Long Beach, I guess, for over a year, so I have not been on the spot, but I know what the conditions are.

Mr. LIPSCOMB. Is there any request for funds for the construction of an adequate hospital at the Long Beach Naval Base in the budget?

Secretary FRANKE. We had it in our original request to the Secretary of Defense, but it was taken out along with a lot of other hospitals, not only for the Navy, but the Army.

Mr. LIPSCOMB. I wish it were possible that this be reviewed in some detail because it looks like a very critical situation in Long Beach. I believe the way the men have to be treated now by the Navy certainly does not add to the morale situation or to their welfare in any respect. I was really shocked when I went through the U.S.S. *Haven* and saw the conditions. The Navy medical personnel I believe are doing their best with the facilities they have to work with. I believe this needs some attention and some priority by the Navy.

Secretary FRANKE. The Navy had it in its request. I share your views. It is not only the men in uniform, but it is the tremendous number of dependents in that local area. It is not all Navy, by any means, but also the Army and the Air Force.

Mr. LIPSCOMB. I realize that. I was at the time speaking to military personnel using the U.S.S. *Haven* as their hospital.

Is there any way that you can say what priority was put on the hospital at the naval base at Long Beach?

Secretary FRANKE. No. All of these items were considered on high priority. There was never any identification of which was first. They were all high priority items.

Mr. LAIRD. If the gentleman will yield, in military construction you do list these by priority numbers. You do have a high priority number on it?

Secretary FRANKE. We do for a great mass of the items that are in the Navy thinking. When this gets up to the final determination it is

pretty hard to determine. This had a high priority, there is no question about that.

Mr. LIPSCOMB. It is a large base and an important base, and it certainly looks like a serious situation to me.

DEFINITION OF "SLOWLY SHRINKING NAVAL ESTABLISHMENT"

Admiral Burke, in your statement you mentioned that each year it costs more to operate a slowly shrinking naval establishment. Would you mind defining what you mean by "slowly shrinking"?

Admiral BURKE. Yes. In 1955 we had 1,030 ships in the active fleets in the Navy. Now, at the beginning of this year we had 864. By July 1 we will have in the neighborhood of 817.

Mr. FLOOD. What was that first figure, the first year?

Admiral BURKE. 1955.

Mr. LIPSCOMB. Why do you pick the year 1955?

Admiral BURKE. Because that is the year that I came into office, sir. I did not want to pick the Korean war years.

We had 9,761 operating aircraft at the same time, and we are coming down this year to 6,852 operating aircraft, and will come down next year to about 6,800 aircraft.

Our civilian personnel are also coming down approximately 2 percent this fiscal year.

Mr. LIPSCOMB. By using that term "slowly shrinking" you did not use that in the same context as saying you are becoming weaker, because in previous questions you said that the Navy is stronger.

Admiral BURKE. Individual units are better units now. The new units coming into the fleet are much better units than those they replaced, but if you need one ship, for example, in the Taiwan patrol and also a ship in the Japanese Sea, one modern ship will not fulfill the purpose of having two ships. They have to be in different places. The increase in the effectiveness of one ship will not take away the need for a number of ships and aircraft.

Mr. LIPSCOMB. You are just using the term "slowly shrinking" with regard to size?

Admiral BURKE. In size. Our combat capability is relatively about the same as it was. But we cannot do as many tasks with this number of ships and aircraft as we could do with the greater number we had in the past.

Mr. LIPSCOMB. As you look at this you are taking into consideration the overall war plans, the military requirements, the new weapons and ships and aircraft that are coming in, and all the factors involving your capability, and you are saying that we are stronger?

Admiral BURKE. We are stronger than we were a few years ago, but relative to the increase in Russian strength we are about the same.

Mr. LIPSCOMB. We are stronger than we were in 1955?

Admiral BURKE. Yes, we are stronger than we have ever been before because our equipment is better, but relative to the Russians we are about the same.

Mr. LIPSCOMB. So I understand the term "slowly shrinking" applies to the size and numbers of ships and aircraft of the Navy, and not to your capability?

Admiral BURKE. Yes, the shrinkage affects the capability because we cannot perform as many tasks.

Mr. LIPSCOMB. How can your capability be shrinking when you say that we are stronger?

Admiral BURKE. It is because we are using general terms. We are trying to encompass too much in one general term. It cannot be done. We can handle a fewer number of situations with a fewer number of ships. We can move the Marines to an objective area faster and we can cover them better, but we can carry fewer Marines now than we could a few years ago. Our gunfire support is better than it was a few years ago, but we have fewer guns.

Mr. FORD. Would the gentleman yield? Is it not fair to say, though, in this kind of hypothetical case, if you have two ships that are not up to the standards of proficiency that you want and you substitute one ship in the place of the two with the one having a high degree of proficiency, cannot that one ship do as well in that location as the two might?

Admiral BURKE. It is possible under certain conditions.

Mr. FORD. There are many variables?

Admiral BURKE. There are other conditions in which that would not be true.

Mr. FORD. I agree. I think that the illustration that you used is not always true because there is the other opportunity where one first-class ship can do as well, if not better than two that are not as competent.

Admiral BURKE. Yes. What I am trying to point out is that you reach a point after a while when you cannot do with a lesser number, even though you have to take lower performance. We are reaching that point right now in buying aircraft. We have better attack aircraft than the A4–D but that is a good aircraft. Because they are cheaper we can buy numbers, and we need numbers of aircraft. Consequently, we are buying a lot of A4–D's. They will fulfill their purpose.

Mr. FORD. The question that Mr. Lipscomb raised has been the same one that I was discussing with you.

Admiral BURKE. Yes.

Mr. FORD. And this is the area where I think we ought to have a payoff.

Admiral BURKE. That is right.

Mr. FORD. I am sure we are getting it. I hate to see it said that you can never substitute one first-class sailor for two less than first-class sailors, or one first-class ship for two less than first-class ships.

Admiral BURKE. I would agree with you, sir, and I am fearful of saying just that and having a substitution made, one for two. This could lead, in one extreme, to not having anything to put into the Pacific because all of our forces would be in the Atlantic.

Mr. FORD. I agree. You have two sides to it. Let us not just paint one side.

MOBILITY OF POWER AND RESOURCES

Mr. LIPSCOMB. You indicated the Soviets were building up their naval strength. Why is it they are not building aircraft carriers?

Admiral BURKE. Because the Soviets expect to fight on their own periphery. Their allies are near them. Our forces are overseas and

our allies are overseas. We have to take airpower to them. We have to control the seas. We have to use the seas. The Soviets do not actually have to use the seas. They have to deny us the use of the seas. That means if they can get along with the land-based air in the vicinity of their own territory and strike us effectively that is what they will do. On the other hand we have to go overseas in order to be effective. By "we" I mean all of our airpower and resources.

I would like to elaborate on that, but I do not want to take all of your time.

Mr. LIPSCOMB. It is an interesting subject. We are stressing mobility. We are stressing the fact that stationary air bases are easy targets. They would not be mobile. They also have the problem of stationary air fields and easy targets.

Admiral BURKE. Mobility is very important, but also unknown locations are important. You cannot strike a target if you do not know where it is. They do not require aircraft carriers to deny us the use of the seas. We do require aircraft carriers in order to carry the war to the places where both limited wars and general wars will be fought.

In limited war, in southeast Asia, there are places where only an aircraft carrier will provide the aircraft necessary to fight the war. There is no other way to do it. The Russians, on the other hand, have no intention, probably, of landing in the United States, or in Latin America with any significant troops. If they did want to do that, if they had to do that, they would have to have aircraft carriers in order to do it. That is not their war plan. Their allies are on their own periphery, nearby. That is why they are having a little difficulty right now with Egypt and Indonesia, which they wanted to bring into their orbit. They cannot do it quite because they do not control the seas.

Mr. LIPSCOMB. Thank you, Mr. Chairman.

Mr. MAHON. Mr. Laird.

Mr. LAIRD. During the interim between the sessions the chairman of the committee asked Congressman Lipscomb and me to look into the antisubmarine warfare program. In the last session of Congress this committee made an add-on to the antisubmarine warfare program. When we got over to the Senate with the add-on that we had made for antisubmarine warfare we were not able to maintain the entire amount we had made available to the Navy.

When we get into the research and development section of the budget I have some specific questions in that particular area.

AVAILABILITY OF FUNDS ADDED BY CONGRESS FOR ANTISUBMARINE WARFARE

I have a question now that pertains to the funding of the add-on by the Navy in the area of research and development.

We have been told by the Navy that they place antisubmarine warfare research and development in the highest priority in the Navy budget. We found that the Department of Defense had immediately made available to the Navy 95 percent of the total research and development funds in the 1960 budget. We were told that the Department of Defense felt that because you placed antisubmarine

warfare work in such high priority that certainly the $45 million add-on which we made would be considered part of this 95 percent. We were told by the Navy just shortly before Christmas they did not have the $45 million to obligate.

Admiral BURKE. Yes.

Mr. LAIRD. In the Secretary of Defense's statement he informed us on January 7 release was made of the $45 million and I assumed that was an additional $45 million.

My first question is, why did you not consider our $45 million add-on in the 95 percent of research and development money made available to you at the start of this fiscal year?

Admiral BURKE. Are you talking about research and development now?

Mr. LAIRD. For antisubmarine warfare.

Admiral BURKE. First, I would like to say that we have committed those funds now. But we could have done the reprograming that you wanted without any add-on because we did not get the $45 million at that time. If you had not put a nickel in that budget we could have done the reprograming of $45 million within our other programs the way we have done. When the committee put the add-on in, it meant the Navy should get the additional money. We did not get the additional money. We did reprogram within the money we had originally in the budget, so the antisubmarine warfare items were included in our program. That is what we have done.

Mr. LAIRD. My point is, the Navy was given 95 percent of their appropriation for utilization in research and development. It was released soon after the start of the fiscal year. That is approximately the correct percentage. The Navy up until some time in January never programed this $45 million antisubmarine warfare add-on in research and development.

Admiral BURKE. Let me try it this way: when we submitted our plan to the Congress, the original budget plan, we had an excellent program for research and development in there.

Mr. LAIRD. That plan was about $175 million?

Admiral BURKE. $180 million. When you added the $45 million, the total research and development funds for antisubmarine warfare came to $225 million, but our total budget for research and development was not apportioned to us.

Mr. LAIRD. Was not 95 percent of it apportioned?

Admiral BURKE. Yes, it was, but that would have meant reprograming projects which were already in existence. We would have to close out going projects or not start other very important projects. The program we submitted to the Congres last year was the best overall program that we could provide. You added $45 million, but we did not get the added $45 million apportioned to us. We got instead the suggestion that we reprogram within our old limits.

Mr. LAIRD. The add-on by this committee then does not affect your priorities at all?

Admiral BURKE. Yes, it does. Let us take a hypothetical case. Suppose that our total procurement was $5 billion. You add $1 billion now for the procurement of antisubmarine warfare items. That makes a total of $6 billion. Then we are told to reprogram our previous programs to absorb that $1 billion, within $5 billion. Our whole program is thrown into a cocked hat. It takes a great deal

of effort to reprogram. It would mean much stopping of work on other programs.

Mr. LAIRD. How much were you released of the $225 million?

Admiral BURKE. We have authority on January 7 to commit those funds.

Mr. LAIRD. Before January 7 how much authority did you have to commit?

Admiral BURKE. We did not think we had the authority to commit, but the Department of Defense did, and that is why the letter came out. Now we have authority to commit all but $65 million of it.

Mr. MAHON. All but $65 million of what?

Secretary FRANKE. Research and development.

Mr. MAHON. Not of the $225 million?

Admiral BURKE. That is correct.

INITIAL APPORTIONMENT OF RESEARCH AND DEVELOPMENT FUNDS

Mr. FORD. Early in the fiscal year you were allocated 95 percent of your total research and development budget, and dollarwise how much was that?

Admiral BEARDSLEY. About $1 billion. We can put the exact figure in the record.

(The requested information follows:)

Fiscal year 1960—Research, development, test, and evaluation, Navy

	Available	Initial apportionment, Sept. 17, 1959	Bureau of Budget reserve
1. Net obligational authority	$1,015,920,000	$954,037,026	$61,882,974
2. Unobligated balance brought forward	51,657,974	51,657,974	0
3. Reimbursements	1,098,000	1,098,000	0
Total	1,068,675,974	1,006,793,000	61,882,974

Mr. FORD. As of now have you received 100 percent of your request, plus the add-on, in research and development?

Admiral BEARDSLEY. Yes.

Admiral BURKE. No, less $65 million.

Secretary FRANKE. We get into two areas here, commitment versus authority for obligation. We have all the money for commitment except that $65 million that is temporarily held up for obligation, but only tentatively.

REVISED APPORTIONMENT OF R. & D. FUNDS

Mr. FORD. For my information, put in the amount of money that you were allocated initially at the beginning of the fiscal year; secondly, how much you have now been given and if there is any difference, explain it.

Secretary FRANKE. All right.

(The requested information follows:)

Fiscal year 1960—Research, development, test, and evaluation, Navy

	Initial apportionment, Sept. 17, 1959	Latest apportionment, Jan. 7, 1960	Difference
1. New obligational authority	$954,037,026	$1,005,444,000	+$51,406,974
2. Unobligated balance brought forward	51,657,974	49,408,530	−2,249,444
3. Reimbursements	1,098,000	1,098,000	0
Total	1,006,793,000	1,055,950,530	+49,157,530

EXPLANATION OF DIFFERENCE COLUMN

1. New obligational authority, $51,406,974

a. Fifty million four hundred and twenty-four thousand nine hundred and seventy-four dollars apportioned by BuBud on January 7, 1960, for antisubmarine warfare ($45 million) and Project SIDEWINDER ($5,424,974). DOD financial plan obligations were not increased by these amounts. Within available financial plan obligations, the Department of the Navy may obligate all of the antisubmarine warfare availability but must defer other projects to do so.

b. Seven hundred and thirty-two thousand dollars apportioned by Bureau of Budget for research and development work by the Marine Corps on amphibious vehicles. These funds were initially programed in support of the LACROSSE program until the Marine Corps elected to discontinue participation in this project.

c. Two hundred and fifty thousand dollars apportioned by Bureau of Budget to expedite a project at the Naval Research Laboratory.

2. Unobligated balance brought forward, $2,249,444

This adjustment results from correcting the unobligated balance brought forward to the certified balances. (An estimate had been used in the initial apportionment.)

Mr. MAHON. Gentlemen, we will stand adjourned until 2 o'clock.

AFTERNOON SESSION

Mr. MAHON. We will resume our hearing. Mr. Laird, will you continue with your interrogation.

Mr. LAIRD. Mr. Secretary, I would like a list placed in the record at this point showing how the $45 million will be apportioned.

Secretary FRANKE. Very well, sir.

(The information requested is classified and has been supplied to the committee.)

Mr. LAIRD. In the add-on made for ASW work in the last session of Congress in the amount of $137 million, have all those funds been apportioned?

Secretary FRANKE. They have all been apportioned.

Mr. LAIRD. Could you list for us the apportionment of the $137 million?

Admiral BEARDSLEY. You mean the application, how we are applying it, so much for this and so much for that?

Mr. LAIRD. How it is to be used in ASW work.

Secretary FRANKE. It has all been apportioned and is being used in the Navy work. In other words, we are committing the money or contracting for the money.

(The information requested is classified and has been supplied to the committee.)

NOISE REDUCTION IN CONVENTIONAL SUBMARINES

Mr. LAIRD. In the ASW work, I have noted that there are no requests which the Navy makes other than the conversion of the *Albacore* for any work on conventional submarines. In view of the difficulties that you have had with the noise level in nuclear-powered submarines, in ASW work, is there not some place for the conventional type submarine?

Admiral BURKE. Yes, sir; and we are doing a small amount of work on conventional propulsion plants in R. & D. and we are putting in a new battery in the *Albacore*, which will increase her propulsion power quite a bit.

We are also working closely with the Germans and Italians on conventional powerplants because they are building conventional powerplants.

(Discussion off the record.)

Mr. LAIRD. We can get into this particular area and develop it more. My time is limited here and I do want to get into another area. When we get into R. & D. and ship construction, I would like to go into it further.

Admiral BURKE. We can put that in the record at this point, if you like, sir.

(The information to be supplied follows:)

NOISE REDUCTION IN CONVENTIONAL SUBMARINES

Noise reduction in conventional submarines has been an active program since World War II. It has resulted in sound isolation, mounted engines, and quiet auxiliaries in postwar construction of conventional subs. There were seven of these. Auxiliaries were satisfactory but main engines were not. Advanced experiments were then tried in *X–1*, *Gudgeon*, *Darter*, and *Harder*. From results of these experiments the Navy will try a completely quiet snorkeling engine on *Pomodon* in the spring of 1960. If completely successful, follow on FRAM submarines will all be fitted with such engines.

Status of the FRAM in conventional submarines is as follows: One model completed: U.S.S. *Tiru*; two to be put in the FRAM program in fiscal year 1961. The numbers that will be completed in fiscal year 1962—in calendar year 1963—will depend on the money available. A total of 23 have been proposed for the 2-year period.

MOBILITY OF MISSILE LAUNCHING

Mr. LAIRD. It seems to me that the Navy is not placing as much emphasis as it might in the development of its budget in the area of mobility of missile launching. I happen to serve on the Military Construction Subcommittee and in the last week we have had requests for additional hardening appropriations on both ATLAS and TITAN. It seems to me that the Navy is going to have a much greater role in providing the deterrent capability, which this country must maintain. What are you doing so far as plans for missile launching ships?

Admiral BURKE. At one time we submitted a program to the Secretary of Defense to put the POLARIS missile in surface ships, both in cruisers and merchant-type ships. It was felt the proposed program was too early. We have conducted and are continuing studies on placing missiles in surface ships of all types.

We are also studying solid-propellent missiles larger than POLARIS, but we have not done any research on the missiles themselves.

You are quite correct that ship-launched, solid-propellent missiles will be of extreme value.

Mr. LAIRD. I see nothing in your presentation that even mentions it.

Admiral BURKE. We have no program, sir, as such. We have just studies and research.

Mr. LAIRD. We are spending well over a billion dollars in hardening in the United States and making the United States a target area. It affects many millions of people living in this country. The exception is the POLARIS submarine system. Has there been any consideration to placing missiles on surface ships such as LST's and ships of that type?

Admiral BURKE. Yes, sir; an LST is a little shallow. It would have to stick up quite a bit. We conducted studies on putting them on barges. Barges did not turn out to be very feasible because you have to put a powerplant and a lot of power gear on it, so that by the time you get through you have a pretty good-sized small ship.

Merchant ships looked attractive, 5,000 or 7,000 tons. We have space reserved in the cruisers so that we can backfit missiles into these ships as they go through modernization. The best bet seems to be to have all cruisers with a POLARIS missile launching capability. In that way when a cruiser is deployed she has her missiles; and she will have a dual purpose. If we want strictly missile ships, with no other capability, the best bet would be to put them in merchant-type hulls.

Mr. LAIRD. Even a POLARIS submarine is cheaper than the hardening that goes into a fixed base in the United States.

Admiral BURKE. That is correct, sir. It depends on the type.

Mr. LAIRD. The type of hardening before us now is much more expensive than a POLARIS submarine.

Admiral BURKE. Yes, sir.

Mr. FORD. Is there any conversion possibilities of battleships, capital ships such as that, for POLARIS?

Admiral BURKE. Yes, sir; but there is a possibility of it, although it costs more to take the gear out of the battleship than to put the same number of missiles in a merchant-type hull. You do not get much for money spent modifying battleships. It is still possible.

Mr. LAIRD. Why is it the Russians are giving so much stress to mobility and we do not seem to be doing that in our program?

Admiral BURKE. We have been pushing this pretty hard in the Department of Defense. The big reason for not going pretty fast on this now is, apparently, that we do not yet have an operational missile system. We will have that operational missile system within a few months.

Mr. LAIRD. We are going ahead with the hardening of the TITAN bases and we do not have an operational TITAN missile.

Admiral BURKE. That is correct, sir. There is another advantage in putting missiles in ships. When you get a modification of a missile, it does not cost so very much to put a new missile in the same old ship. For example, we have several different lengths of POLARIS, A–1 and A–2, which are slightly different improvements, but we can use the same tubes.

Mr. LAIRD. It seems to me your presentation as far as the carrier was concerned and the difficulty in targeting in on a ship applies just as well as in the missile field as it does in any other area.

Admiral BURKE. It does, sir.

Mr. LAIRD. I would think that the Navy would have a responsibility to be developing some plans along this line, because I can see the day when the Navy will have to assume more responsibility for our deterrent striking force. I think the American people are going to get fed up with having these big missiles located all over the continental United States.

Admiral BURKE. We have plans.

Mr. LAIRD. Our missile bases will be the first target. If the Russions strike the first blow, they will go for the missiles and not for population centers or industrial centers.

Admiral BURKE. Yes, sir.

(The following material was inserted at the earlier request of Mr. Flood:)

[From the Daily Pantagraph, Bloomington, Ill., Nov. 17, 1959]

(Nineteenth of a series)

NAVY HAS ANSWER—FLEET MOBILITY CAN AVERT DISASTER OF STATIC DEFENSE

(By Davis Merwin)

Throughout the years in this column your correspondent has stressed above all the military virtues of mobility—and the fact that only the naval service can provide that deterrent or fighting advantage in the true sense. We just don't want to sit at home with our multi-billion-dollar Maginot defenses sprinkled all about us.

Why? We would leave no doubt of two discomfiting facts: First, that due to our manner of life, the enemy would have every bomber and missile launching point precisely located; and second, as he stockpiles his ICBM's and IRBM's, he will preset his missile aim and when adequately supplied with weapons, simply push the button.

We might detach from this second unhappy prospect, a third, for emphasis: We shall have spent these tens and perhaps hundreds of billions of dollars solely to have the "investment" destroyed along with one-third or half our population—in other words, set ourselves up as potshot targets and thus attracted enemy fire that might better have gone elsewhere.

REDS WAIT CHANCE

Of course the United States has imparted ad nauseum, and given eyewitness conviction to the world's No. 1 Red, the assurance that we want him to shoot first. Thus when he has gathered enough long-range, nonstop weapons to wipe out our takeoff sites for retaliation, he will simply proceed to the kill. Under those circumstances, authorities have estimated up to 50 percent loss of U.S. population. This does not take into account the deadly fallout which will be intensified to highly lethal extent by the results of our announced program of "hardening" the submerged launching "silos" with steel or concrete or both.

This column has repeatedly drawn attention to an effective substitute for the certain disaster to result from static "defense," sometimes called Fortress America. The substitute is none other than high-speed mobility and thus capacity for tactical evasion and surprise yielded alone by the sea. Add to this, the excellence of the U.S. naval service born of centuries of proven techniques and continuing refinement of ship design, weapon improvement, and the invention and development of other precision systems, to complete a smash hit.

ASKS FAIR SHARE

This column has, at the expense of criticizing Air Force cupidity, pleaded for diversion to the naval service of a proportion of the defense budget essential to refinement of the shipping and weaponry of the naval service without whose seagoing competence we can neither import the critical raw materials for all forms of security, nor control and exploit the lanes of the high seas and make

the amphibious landings necessary to fruition of the all-important mobility possessed in only a token sense by our land forces, the Army and Air Force.

This writer has long stressed the incomparable striking power of the aircraft carrier. This warship has been dwelt on chiefly because when the chips are down it is the only contrivance by means of which we can transport and launch combat aircraft, and their service crews and ammunition. Ammunition includes just about all types, large and small, up to fission and fusion (thermonuclear) warheads equivalent in destructive yield to any that can now be projected by the ICBM. The carrier, because it speeds these aircraft to all parts of the globe, is a virtually self-sufficient mobile city of 3,000 or more souls and moves in a task force, has been derided and called old-fashioned—a sitting duck. That is stupid. No substitute has yet been found.

DEPENDENT ON NAVY

What effective weapon is not part of a system, does not serve as a task force element?

The land based airplane must depend on hundreds of billions of dollars of bases; must depend on the Navy to transport to any distant point of action the large proportion of its fuel and in short, over 99 percent of the weight of men, materials, and equipment and so on, concerned with its sustenance. To the casual observer the Air Force exemplifies flexibility, mobility; yet its high speed units are literally stuck in concrete and steel. The Army is freer from dependence on these retarding elements.

But the point here, after stressing the relative invulnerability of the aircraft carrier because of its constant movement at speeds ranging from 30 to 40 miles an hour, is to point again to our naval weapons system just about to come into use. Its advantages are unique and thus of the variety possessing a new and different capacity to strike. Above all, it can almost completely avoid attack.

This is POLARIS, the fleet ballistic missile. It is basically associated with its own specially designed atomic-powered submarine. Both have been mentioned in this column. It packs a mighty wallop, can carry a high-yield H-bomb warhead.

In short, the POLARIS weapon system is to be operational in the fleet within a matter of months, first and foremost to project U.S. retaliatory capabilities to points distant from our homeland. Yet, for the enemy this is uncomfortably well up on his front doorstep.

SAC'S EXPENSIVE

For a major saving in investment and upkeep it could supplant the Strategic Air Command. That, of course, would be heresy, because SAC has not only become sacrosanct, but despite its charm of massive destruction to those who seek shortcuts, it commands an intriguing veil of secrecy and has endeared itself to the American people by what appeals to us most: The biggest investment and plushiest annual upkeep of any portion of any armed service.

For example, it has for years cost more annually than the entire Naval Establishment. SAC has ground its teeth in inaction whilst the Navy and Marines have quelled a number of disturbances the world over.

SAC now has announced that it would like to take over the Navy's POLARIS weapon system—the 1,500-mile high velocity precision atomic missile and its submarines.

AIR DEFENSE PROBLEMS

Mr. LAIRD. Do you consider the antisubmarine warfare problem of greater magnitude and of greater importance than our air defense problem in the United States?

Admiral BURKE. Yes, sir.

Mr. LAIRD. Why is is that this budget gives greater emphasis to the air defense than it does to antisubmarine warfare work?

Admiral BURKE. You mean the Navy budget?

Mr. LAIRD. Overall budget. I am speaking to you as one of the members of the Joint Chiefs.

Admiral BURKE. There is some decrease in the air defense budget this year. The tendency is to reduce the air defense costs. Such

things as BMEWS which is a very important piece of apparatus, are still to be completed. There is still need for some air defense against manned bombers.

Mr. LAIRD. What good would BMEWS be against a missile launched by a submarine?

Admiral BURKE. None whatsoever, sir.

Mr. LAIRD. Do you not think the Russians would understand their best launch possibility would be from a submarine rather than over the top of the North Pole?

Admiral BURKE. I think they will have some of each. A mix will do them the most good, but they will have a lot of them in submarines, I am sure.

Mr. LAIRD. What review have you made, Mr. Secretary, or are you making, of the fleet air defense requirements?

Secretary FRANKE. It is under constant review as to what we need in this particular area. This is a discussion that goes on all the time in the Navy. It is reviewed in this budget, too.

Mr. LAIRD. What decisions were made in this budget? What is the difference between this budget for 1961 and the budget for 1960?

Secretary FRANKE. Things are farther along. For example, the MISSILEER system, which is part of this, is now farther along so we get a better idea of what we want to do. I think as each year goes on, when you get the benefit of research, you then are able to make better decisions.

Mr. LAIRD. How is that reflected in the budget?

Secretary FRANKE. It is in our R. and D. effort in the budget. Take this particular system, for example. We are trying to determine whether we can adapt a present aircraft for this purpose or will have to buy a brandnew aircraft for it. Studies have been made of this. A number of the aircraft companies are involved in making estimates of what they have the capability of doing. All these things take time.

Mr. LAIRD. Have you come up with an estimate as to what your requirements are?

Secretary FRANKE. You mean for the future?

Mr. LAIRD. Yes.

Secretary FRANKE. I do not think we know at this moment what the total is going to be. This is still in the process of being priced out. There is considerable cost involved. Again you get into this question. If you develop a brandnew aircraft for this purpose to carry this missile, that will be a much greater cost, probably, than if we can adapt a present aircraft. Even this is not too certain because the change in the conformation of a present aircraft can also be expensive. This gets involved in the total research and development studies that are made before you can arrive at conclusions.

SUCCESSFUL POLARIS TEST

Mr. LAIRD. Mr. Secretary, I noticed in the morning paper today that the Navy had made its second test of the POLARIS guidance system. Would you care to comment on the results of that test yet?

Secretary FRANKE. This was the second successful guided shot. Off the record, please.

(Discussion off the record.)

Mr. LAIRD. I was somewhat surprised to notice that the announcement of this second successful firing was kind of used as a filler on the bottom of the first page and a statement which took the headlines had to do with the firing of a missile into the Pacific Ocean by the Russians. The firing of a missile by the Russians into the Pacific Ocean is not anything new. As a matter of fact, I noticed that even Joe Alsop in his column a few weeks ago reported several firings by the Russians that had previously been made in the Pacific Ocean area. It seems to me that we are causing the American people to develop an inferiority complex which is not justified. Do you think an event such as this successful firing of this POLARIS missile should be of some reassurance to our people? I am sure if that missile had been a failure, the Navy would have been in the headlines.

Secretary FRANKE. I am sure you are right.

Mr. LAIRD. Evidently, the Navy does not have very good public relations.

Secretary FRANKE. We do not have any control over what the newspapers print or where they print it. I entirely agree with you. It seems to me this was an important accomplishment. Sometimes I am surprised that it even appears on the front page, at the bottom of the page.

Mr. FORD. Unless it is a failure.

Secretary FRANKE. Unless it is a failure.

Mr. LAIRD. That is all; thank you.

CARRIER SIZE AND COST COMPARISONS

Mr. WEAVER. Admiral Burke, in some of the comments you were making with reference to conventional and nuclear carriers, would it be correct to assume that in the future any request for carriers would be of the conventional type rather than of the nuclear type?

Admiral BURKE. That is true unless we get a big increase in the the budget or we get a big decrease in the weight and cost per horsepower.

Mr. FORD. Of the nuclear carrier?

Admiral BURKE. Of the nuclear carrier.

Mr. WEAVER. I have a few points here about the proposed conventional carrier which were disturbing to me. One is that you state that the November 1959 estimate on *Enterprise* includes $27 million which cannot logically be attributed to *Enterprise*. If we were to go ahead with another nuclear carrier, would it not be logical that some of the cost now borne solely by *Enterprise* would be shared on a per unit cost basis with the second carrier, design costs, et cetera, and would not this lower the cost on *Enterprise?*

Admiral BURKE. Yes, sir; the $27 million, though, has been taken out of the cost of the ship in this new pricing and put in development cost. If that new costing concept is accepted by the Congress, then a new carrier would——

Mr. WEAVER. Not cost as much?

Admiral BURKE. That is correct.

Mr. WEAVER. Has the Navy forecast the life expectancy of the *Enterprise?*

Admiral BURKE. Yes, sir; it will be 20 years or more.

Mr. WEAVER. How does this compare with the normal life expectancy of one of the *Forrestal* type?

Admiral BURKE. Same thing.

Mr. WEAVER. You mention a four-reactor plant for the originally proposed second nuclear carrier as opposed to an eight-reactor plant in the *Enterprise*. Would this mean the second nuclear carrier would lose enough of its size advantage to make it not much more useful than the *Forrestal* type?

Admiral BURKE. As far as the plane carrying capacity is concerned, that is essentially correct, but as far as the propulsion plant is concerned, with the conventional-powered carrier, you do not get high sustained speed, and in the nuclear-powered carrier you would.

Mr. WEAVER. Could you give us the size of the crew on the *Enterprise* compared with the *Forrestal?*

Admiral BURKE. I can put that in the record, sir. I don't remember it.

Mr. WEAVER. Very well.

Admiral BURKE. It is not a great difference.

(The information to be supplied follows:)

COMPARISON IN SIZE OF AIRCRAFT CARRIER CREWS

The crew of the *Enterprise* will number about 330 officers and about 3,950 enlisted personnel, compared to about 325 officers and 3,800 enlisted personnel for a carrier of the *Forrestal* class operating similar aircraft during the same time period.

There is no significant difference between the total crew required to man a new four-reactor nuclear powered aircraft carrier and that required for a new conventionally powered carrier. Both would have a peacetime allowance of about 112 offices and about 2,600 enlisted personnel. These figures are exclusive of air group personnel and any staff personnel that may be embarked. In each case, the ship's air group would consist of about 213 officers and 1,213 enlisted in addition to the ship's company. Therefore, in peacetime, either ship, when air group is embarked, will have about 325 officers and about 3,800 enlisted personnel on board. In wartime, crew strength could be augmented up to the maximum berthing and messing facilities of the ships, or a total of about 4,650 officers and men.

For additional comparative purposes, the current allowance of the *Essex* class including the air group is about 240 officers and about 2,900 enlisted men.

REVIEW OF CARRIER BY JOINT CHIEFS OF STAFF

Mr. WEAVER. Bearing in mind budgetary considerations and all other factors you have outlined here for us, were the relative merits of nuclear versus conventional carriers thoroughly examined by the Joint Chiefs of Staff as a body?

Admiral BURKE. They were examined and I explained it. How thorough it was is another question.

Mr. WEAVER. Maybe that was covered. I was not able to be here for all of the testimony because of another hearing.

Admiral BURKE. They were examined by the Joint Chiefs of Staff.

Mr. WEAVER. What was their decision?

Admiral BURKE. You have got me in a little difficult spot here, sir. Discussions in the Joint Chiefs of Staff are submitted to the Secretary of Defense and they are really his information. The reason for that procedure is that we discuss mostly war plans in the future, and things

like that, and we do not discuss what happens in the Joint Chiefs of Staff as a general rule.

Also, there is difficulty in exactly expressing what another man thinks or what another man said because your memory fails sometimes. But, in general, they went along with a conventional-powered carrier.

THRUST OF ROCKETS

Mr. WEAVER. The other day when Secretary of Defense Gates was here we were discussing the military significance of the thrust of the rockets the Russians have compared to the ones that we have. He said that as of this moment there was no special significance militarily to this thrust. My contention was that it was significant because of the fact that we were seeking a bigger payload for our missiles. What would your comments be as to the thrust?

Admiral WEAVER. The payload in an ATLAS missile is a big payload. An increase in the weight carrying capacity for an ICBM would not increase the effectiveness of your missile very much as a missile at that range. You can get either range or payload.

Mr. WEAVER. Do you believe that the Soviets have concentrated on thrust purely for splashy propaganda purposes or do they particularly have future military events in mind?

Admiral BURKE. Both, sir, but this is what I think the Russians have done not only in this line but in all other lines in the last 5 or 6 years. They have looked at things to see where they can get a great psychological payoff. They have concentrated on those things where they ca get a psychological payoff that also has other advantages. They capitalize on them. They do it with sports, they do it with everything. In their shows they are putting on in Cuba, they are capitalizing in the same way.

Mr. FLOOD. What are they doing in Cuba?

Admiral BURKE. They took the fair they had in Mexico and are moving it into Havana.

EVACUATION OF DEPENDENTS

Mr. WEAVER. Admiral Burke, when I was in the Far East last year, we had quite extensive briefings at Admiral Felt's headquarters in Hawaii and subsequent briefings as we moved through that area. One of the problems that frequently came up as a matter of discussion was the crisis that might develop should we have to remove in an emergency situation any civilian dependents from these areas.

One military spokesman went so far as to say most of our transport facilities would be tied up moving out women and children and would be incapable of moving supplies. What comments would you have on that, sir?

Admiral BURKE. It is always a big problem and even a bigger problem in Europe. In case of an emergency like that, we would commandeer and charter commercial ships, which we have the authority to do when an emergency is declared. Many of those dependents

would be moved by commercial ships if these ships happened to be in the proper area at the time. If not, we would move the dependents with our MSTS ships.

Mr. WEAVER. You do recognize that as a problem of perhaps grave importance should emergencies arise?

Admiral BURKE. Yes, sir; that causes us difficulties in all parts of the world. We have a daily chart which advises not only the location of our dependents, but of all Americans and American-supported people in other places that might require their evacuation.

PILFERAGE AT OVERSEAS BASES

Mr. WEAVER. Also when I was in the Far East, I ran into what appeared to be a major problem, that of pilferage by local citizens. I am referring specifically to the Philippines where there seemed to be no effort by Philippine authorities to help control and correct the problem.

Does the Navy have any estimate of the dollar amount of losses that have occurred at any of our bases, not only in the Philippines but in other areas of the world where we have personnel stationed?

Admiral BURKE. Yes, sir. I don't remember. We have an estimate in foreign bases which I can supply for the record, sir. I do not remember it. The Philippine situation has improved a great deal in the last few months because the Philippine constabulary is now working with us very well and the police seem to be making a much greater effort to put an end to pilferage.

(The information is classified and has been supplied to the Committee:)

Mr. WEAVER. I might ask you whether as Chief of Naval Operations you consider this pilferage a serious problem not only in the Philippines but in other areas of the world?

Admiral BURKE. Yes, sir; it is one of our great problems. In some areas it is bad and in other areas it is not.

REACTION TIME IN EMERGENCY

Mr. WEAVER. At this time is the Navy capable of taking an effective role in limited fighting in two areas of the world?

Admiral BURKE. Yes, sir; if one is in the Atlantic and one is in the Pacific. If there were two areas of limited fighting in the Pacific, we would have to move a portion of the Atlantic Fleet into the Pacific.

Mr. WEAVER. I note that there has been a cutback in both naval personnel on active duty and in the Reserve Forces. In addition, because of the cuts in strength, the use of aircraft by reservists is strictly limited. Also, I have noticed that ships are not actively patrolling the seas or maneuvering as much as before. How will this affect the Navy's reaction time in case of serious trouble?

Admiral BURKE. That is divided in two parts, Active Forces and Reserves. In the Reserves, what we are doing is to convert most of

our Reserves to antisubmarine warfare reserve types. They are getting quite a bit of training, but it will take them some days. They will be able to go to sea right away, but it will take them some days before they are fully capable. They will be of considerable assistance.

As far as the active fleet is concerned, reduction of our steaming time at sea reduces training a little. We are trying to make training the last thing we reduce. We are trying to reschedule things to get the maximum amount of training for every hour of steaming.

Mr. WEAVER. With the ships the Navy has now and those which will be coming into the fleet, how long could the Navy sustain a full-scale operation? Would it be several weeks or months, or what?

Admiral BURKE. That depends on the size of the operation.

Mr. WEAVER. I mean short of a nuclear exchange.

Admiral BURKE. In the Taiwan and Lebanese crises we were stretched very, very thin. Our people were getting tired and they were being pushed pretty hard. You can always go a little further, but people get less efficient just about that time.

Mr. WEAVER. How long do you think it will take the Navy to get into the kind of shape you would like to have it in as far as manpower and the fleets are concerned?

Admiral BURKE. If we have an emergency, these 129,000 Reserves will immediately increase the manning level of the fleet and take their ships and aircraft to sea. That will only take a day or so, but then they are not as well trained and some additional training will be necessary. The fleet will be capable of operating right away. The Reserve will be trained as they are operating.

Mr. WEAVER. With regard to the amount of money for the carrier, if the carrier were disallowed, would you recommend then that that money be shifted to some other items within your budget?

Admiral BURKE. I would like to make a long statement on the carrier not being disallowed but, in that unfortunate circumstance, we would probably want to put that money into antisubmarine warfare equipment in priorities similar to these I read to Mr. Mahon the other day, sir.

Mr. WEAVER. As I recall—I did have the hearings from last year before me yesterday—I believe last year you stated that there were other essential items or items of a higher priority you wanted to use this money for.

Admiral BURKE. Higher than——

Mr. WEAVER. Higher than the carrier. This was last year—items of a higher priority.

Admiral BURKE. Than the carrier, sir?

Mr. WEAVER. Yes, sir; if I am not mistaken.

Admiral BURKE. No, sir. If we did, we made a mistake, sir.

Mr. WEAVER. I was certain that that was the way a staff member and I read it when I was looking at it, that you said you were going to shift it to items of a higher priority. This is last year.

Admiral BURKE. I think I know what it is. That is the difference in cost between nuclear propulsion and conventional propulsion.

Mr. WEAVER. Yes.

Admiral BURKE. That is correct.

Mr. WEAVER. I think that is all the questions I have.

Mr. MAHON. Mr. Minshall.
Mr. MINSHALL. I yield to Mr. Thomson.
Mr. MAHON. Mr. Thomson.

COMPARISON OF NUMBERS OF SHIPS, 1950–61

Mr. THOMSON. Admiral, I have here this classified document which has been handed to us. I am referring to page 34. I note with interest comparative numbers of different types of ships that we have had over a period of almost 10 years. It is my general observation that in each instance with reference to any particular class of ship we today have as many or more than we had at the beginning of the table, virtually as many or substantially more. Is that about correct?

Admiral BURKE. The beginning of the table here, sir, was before the Korean war; June 30, 1950, before the Korean war. At that time we had all of the World War II ships, which were still comparatively new, in reserve. Immediately at the time of the Korean war, we doubled the number of ships in the Navy in a period of a couple of months, a very few months. Since the Korean war we have gradually decreased the size of the Navy.

Mr. THOMSON. Let us take the general category of combatant ships. I realize this is classified and we have to be careful how we handle it. There has been almost a 50-percent increase in the general category since before this period of 1950.

Admiral BURKE. That is one of the reasons why the Communists attacked. The Navy was at a minimum level. We had no troops, we had very few ships. We said that we would not defend Korea. They started their attack. We immediately had to double the size of the Navy and increase——

Mr. THOMSON. So we have got substantially more, almost 50 percent more, than we had at that period and it is not very much off of what we had during our peak of that difficulty.

Admiral BURKE. Yes, sir; it is 50 percent, about, of what it was.

Mr. THOMSON. You had better take another look.

Off the record.

(Discussion off the record.)

Mr. THOMSON. Since that time, by reason of going to nuclear power in some instances and other improvements, a given ship is more effective than it was previously. That is, a replacement ship. Is that correct?

Admiral BURKE. That is correct.

Mr. THOMSON. In addition to the ones shown here, do you have others that are standing around shipyards like some of these out on the west coast, and so forth, that could be called back into service in event of an emergency?

Admiral BURKE. If you are talking about carriers, no sir.

Mr. THOMSON. General category.

Admiral BURKE. They can be, but very few of them will be immediately useful. They will have to have new equipment put in them, new electronic equipment, new sonars, in order for them to be valuable. That is why we are disposing of such a great number of our reserve fleet. That is also the reason why Russia has built such a tremendous number of ships. She has built more ships in every category since World War II than we have, except carriers.

Mr. THOMSON. She would not have had to build many more carriers because she did not have any.

Admiral BURKE. She has not built carriers and she does not need carriers because she does not have to control the seas.

Mr. THOMSON. Without further debating the proposition, my conclusion in looking at this table has been simply that we have kept up and increased these different categories of ships and, furthermore, they are better ships than we had before to the extent they have been replaced at least by reason of nuclear power and other refinements, some of which you just mentioned.

Admiral BURKE. Many of the ships in the 1961 column, sir, were also in the 1950 column. Many of these ships in the 1961 column are now reaching the end of their life. These are not new ships. About 78 percent of our fleet now are World War II ships. They are wearing out.

Mr. THOMSON. When we get down to the category of POLARIS, we had none, now we have a substantial number. We get down to nuclear attack submarines and the same thing is true. In the case of guided missile ships, we find that going up very substantially. In addition to that, you have up here under "Guided missile destroyers," a substantial increase, starting from nothing, you built it up. With these new improvements and with these new additions that have come into your fleet beyond the categories we had at that time, do you not have a very much greater capacity as far as a navy is concerned than you had at any time during any period previously?

Admiral BURKE. No, sir. These ships are just like automobiles or any other piece of equipment. You run them so long and buy a new one or you pay like hell for the upkeep of the old one. True, these new individual ships are better than the ships they replaced, but also the enemy is building similar ships, building guided missile destroyers, building ballistic missle submarines. It just about balances out.

Mr. THOMSON. I will not continue this further. I would like to do it in another committee because it is very impressive to me that you have such great capability there, greater than you have shown before.

IMPORTANCE OF NAVAL BASE IN CUBA

Please answer for the record: How important are your bases in Cuba?

(The information to be supplied follows:)

IMPORTANCE OF THE U.S. NAVAL BASE, GUANTANAMO, CUBA

1. Strategic role

(*a*) Guantanamo Bay is a part of the base complex consisting of Panama, Trinidad, Roosevelt Roads, and Guantanamo Bay, required to support combatant naval forces in the defense of the Caribbean Sea area, to carry out ASW operations, to defend the Panama Canal, and to protect shipping between the Caribbean and eastern Atlantic-South American ports.

(*b*) The naval installation in the Guantanamo area provides an important contribution to the defense of the United States. The base at Guantanamo provides excellent year-round training facilities for U.S. naval forces. The installation also provides an important support base for wartime naval operations to insure control and protection of the Caribbean area. Denial of these facilities to the United States could have far-reaching effects on the overall political and military stability of the area. The base is in no way obsolete and will be required in the foreseeable future for support of units of the Atlantic Fleet.

Retention of these facilities provides assurance of a continuing U.S. military and political position of strength in this potentially critical area. Development of similar alternate facilities in the area would require extensive expenditures from U.S. resources.

(c) In summary, the U.S. Navy has a continuing requirement for the naval base at Guantanamo Bay to insure that essential fleet training may continue in an orderly and uninterrupted basis, and, in the event of war, that it may be used in support of essential naval operations to insure control of the vital Caribbean Sea area.

2. Strategic consideration

(a) *Controls the Windward Passage.*—The Windward Passage is one of the main entry points to Caribbean. It is on the direct shipping route from Europe and South America to the Panama Canal.

(b) *Base for ASW operations.*—Fine natural harbor and well-developed facilities for basing and logistic support of ASW forces covering the trade routes, Caribbean Sea, and lower Atlantic.

(c) *Base for defense of inter-America shipping.*—Is a midlink in chain of key points, Key West, Guantanamo, Puerto Rico, Trinidad for providing air and surface protection of shipping engaged in the transport of strategic materials from South America to the United States.

(d) *Controls air routes from the east coast of the United States to the west coast of South America.*—Is located midway on overwater routes.

(e) *Base for training ships and crews.*—Fine natural harbor and well-developed installation for training ships and crews both in war and peace.

(f) *Damaged ship haven.*—Centrally located as a haven for recovery and repair of ships suffering war damage incident to antisubmarine warfare and convoy operations along the intra-America shipping lanes.

(g) *Key point for operations in defense of Panama Canal.*—Provides centrally located base for surveillance and patrol of sea approaches to the Panama Canal.

3. Support considerations

(a) *Utilization*—(1) *War.*—Reconnaissance, antisubmarine warfare, convoy, and SAR operations in Caribbean area. Protection of the Panama Canal. Air, surface and subsurface training operations.

(2) *Peace.*—SAR and air, surface, and subsurface training operations.

(b) *Forces*—(1) *War.*—Reconnaissance and patrol seaplanes. A/S carrier groups. All types ships and aircraft undergoing training. Mobile support ships. Convoy escorts. SAR Unit (USCG). Transient ships and aircraft.

(2) *Peace.*—All types ships and aircraft undergoing training SAR Unit (USCG). Transient ships and aircraft.

(c) *Support for operations.*—(1) Fleet anchorage and medium naval base. Limited support and repair for DD types and smaller. Large fleet units making use of this base will be completely self-supporting or accompanied by appropriate numbers and types of service ships. Ammunition and POL storage. Airfields (McCalla Hill and Leward Point) and associated facilities with class C maintenance. Naval supply depot—Provisions and general stores. Medical and dental clinic supplies.

(d) *Alternates.*—War and Peace—Roosevelt Roads, San Juan, Trinidad.

(e) *Costs.*—Annual maintenance and operation: $6,142,841. Plant account: $67,297,585.

4. Treaty rights

The United States originally acquired the naval base, Guantanamo Bay, Cuba, through a lease agreement signed by the President of the United States on February 23, 1903, and the President of Cuba on February 16, 1903. This agreement set forth the boundaries of the area and granted the United States the right to do everything necessary to develop the area. While it recognized that Cuba retained ultimate sovereignty (not defined) over the area, Cuba granted the United States complete jurisdiction and control during the period of U.S. use of the area.

By an agreement ratified on October 6, 1903, by both countries the United States agreed to pay Cuba $2,000 in gold coin annually for the use of the leased area, so long as the United States continued to occupy the area. The United States also agreed not to permit any person, partnership, or corporation to establish or maintain a commercial, industrial, or other enterprise within the area. On the other hand the United States was exempted from paying any customs duties or fees on any material imported into the area for exclusive use and con-

sumption therein. Likewise ships carrying such material and discharging it within the limits of the area were to be exempt from all port, tonnage, anchorage, or other fees.

On June 9, 1934, both countries exchanged ratifications of a treaty of relations which superseded the original treaty of relations entered into on May 22, 1903. Article III of this treaty reaffirmed the provisions of the two agreements heretofore mentioned and provided that "so long as the United States of America shall not abandon the Naval Station of Guantanamo or the two Governments shall not agree to a modification of its present limits, the station shall continue to have the territorial area that it now has with the limits it has on the date of the signature of the present treaty."

It is perhaps worth while to note that the two lease agreements of 1903 were executed by the Presidents of the two countries and were not submitted to the Congresses of either country for approval. The 1934 treaty of relations was, however, ratified in accordance with the constitutional provisions of both countries. Since this treaty reaffirmed the provisions of the original two lease agreements the question as to whether these agreements were legal and binding prior to 1934 is purely academic.

RELEASE OF DATA ON PROJECT TEE PEE

Mr. THOMSON. After all the caution I was given about Operation Tee Pee, concerning the secrecy necessary with regard to it, when I came back here Thanksgiving I read all about it in the newspaper. I would like to know what action has been taken to trace that leak and what action has been taken to keep it from happening again.

(The information to be supplied follows:)

ACTION TAKEN TO TRACE DISCLOSURE OF INFORMATION ON PROJECT TEE PEE

1. An inquiry was completed on November 30, 1959, which had been initiated to determine if in fact classified information regarding project Tee Pee and other matters had been disclosed to unauthorized persons and through what channels such disclosures may have been made. The conclusion of the Navy was that no unauthorized disclosures were involved in any of the newspaper articles which appeared between August and October 1959 since the principle involved is well-known industrially, has been discussed in unclassified hearings before U.S. congressional committees and was covered in a news release issued by the Department of Defense on August 7, 1959.

2. The entire problem of leaks and unauthorized disclosure of information is one of great concern to the Navy Department and is under continuing study looking forward to preventing such occurrences. Whenever there has been substance to reported allegations of such breaches of security, investigations have always been initiated.

Mr. THOMSON. In connection with the spending proposition, we understand that the Soviet is spending about the same percentage of its gross national product for its military, while theirs is only 40 to 60 percent of ours. I would like to have your comments on that with reference to what we are getting compared to what they are getting.

Admiral BURKE. This is their gross national product, our gross national product, their defense, our defense?

Mr. THOMSON. As I understand it, we are spending about the same percentage, each of us, of our gross national product or capacity for military.

Admiral BURKE. That is a little out of our line, but we can get the dope.

(A classified statement has been provided the committee.)

Mr. THOMSON. Maybe it would be best to ask someone else.

POLICY ON PROFICIENCY FLYING

I would also like for the record to have you show what your policy is with regard to proficiency flying of those past 40 and no longer detailed to active flying courses.

(The information referred to follows:)

PROFICIENCY FLYING IN THE NAVY

With respect to proficiency flying for naval aviators who are required to maintain basic flying skills, approved naval policy provides for four categories of aviators and related flight requirements:

(*a*) *Category I.*—Aviators who have held designations as a naval aviator for less than 20 years and have not reached age 45.

Minimum required: 90 hours. Maximum proficiency time allowed per year: 100 hours.

NOTE.—This category requirement is based upon the fact that age group 35 to 45 represents a basic resource from which squadron and air group commanders are drawn. For example, the ages of group and squadron commanders of some 200 operational units are between 39 and 45.

(*b*) *Category II.*—Aviators who have held designations as a naval aviator for less than 20 years and have reached age 45.

Minimum required: 48 hours. Maximum proficiency flight time allowed per year: 60 hours.

(*c*) *Category III.*—Aviators who have held designations as a naval aviator for 20 years or more and have not reached age 45.

Minimum required: 48 hours. Maximum proficiency flight time allowed per year: 60 hours.

(*d*) *Category IV.*—Aviators who have held designations as a naval aviator for 20 years or more and have reached age 45.

Proficiency flight time allowed per year: 0 hours.

Consistent with the above, the Navy programs neither aircraft nor operations and maintenance funds to support proficiency flying for category IV aviators.

FLIGHT TRAINING PROGRAM

Mr. THOMSON. I also ran into a situation in seeing some young people that had been down to your Flight Training Center that caused me some degree of alarm as to the efficiency of that operation. I would like to know what your general training period is down there, what it is programed for, to put a man through Flight Training School. That is, how long it actually takes and what the factors are that drag it out, if there are any such factors.

(The information to be supplied follows:)

NAVY FLIGHT TRAINING

The Navy's flight training program for student naval aviators is planned to cover an 18-month period. This provides for 70 weeks of syllabus training and includes planning factors for such things as holiday leave and travel time between units.

The syllabus starts with 16 weeks of indoctrination in Preflight School at NAS Pensacola, Fla. This is followed by 9 weeks of primary flight training in T–34 propeller aircraft. After primary, the student goes through basic flight training, which is about 24 weeks in length. This is conducted in the T–28 aircraft or in the T2V/T2J jet aircraft. Upon completion of basic training, the student moves to the Corpus Christi, Tex., complex for advanced training of approximately 21 weeks. Here, the student specializes in the functional type of aircraft he will ultimately operate in the fleet: Jet fighter, attack, antisubmarine, or patrol aircraft. Upon completion of this course, the student is ordered to a fleet squadron by way of the Replacement Air Group.

An individual student, or group of students, may experience some delay in completing the course within the planned period due to any one, or a combination, of the following factors:

1. Extended period of adverse flying weather in local training area;
2. Temporary grounding of a training type aircraft to incorporate any material change that would improve safety of flight;
3. Failure of a student to maintain progress at the planned rate; and
4. Individual personal problems, such as illness or emergency leave.

During the past 18 months (fiscal year 1959—1st half fiscal year 1960) the time for a student to complete the flight training syllabus has averaged 79 weeks. This compares to 52 weeks 20 years ago when aircraft systems were infinitely less complex and training facilities could be more centrally located.

RELEASE OF UNNEEDED FACILITIES

Mr. THOMSON. I would also like comment for the record as to what action you are taking to do away with some of these facilities that are no longer needed, how many you have released, and also with regard to your industrial standby facilities, if you have any such.

(The information to be supplied follows:)

FACILITIES NO LONGER NEEDED BY THE NAVY

Utilization of naval shore facilities has been and is under constant review. Listing by primary function, of naval shore activities disestablished January 1, 1955, through December 31, 1959:

Function [1]	Major [2]	Minor [3]
Air operations	17	12
Production and/or repair	0	51
Supply	9	58
Ordnance	5	4
Security	0	21
Communications and/or intelligence	1	28
Personnel and/or training (including air)	6	43
Fleet operations	5	11
Medical	0	5
Other	1	11
Total	44	244

[1] Does not include Marine Corps managed activities.
[2] Major activities are those with at least 100 personnel (both military and civilian) on board and a plant account of at least $1,000,000.
[3] Minor activities are those not major.

Future disestablishments that have been approved are:

Activity	*Fiscal year*
MSTS NORPAC sub area	1960
NAD, Fort Mifflin, Pa	1960
Retraining Command, Camp Elliott, Calif	1961
Retraining Command, Camp Langdon, N.H	1961
Reserve flight group, New London	1961
NAAS, Brown Field, Chula Vista, Calif	1961
NAF, Annapolis, Md	1961
NAS, Anacostia (fixed wing flight operations only)	1961
NAD, Hingham, Mass	1962
NAS, Oakland, Calif	1962
NAD, Shumaker, Camden, Ark	1964
NOP, Pocatello, Idaho	1964
NAD, Hastings, Nebr	1966

The Navy has an active continuing program of utilization and retention reviews to assure that industrial plant holdings are limited to the minimum required to accomplish its military missions. In general, these plants are declared excess by the Navy when the overall capacity is greater than that

necessary to satisfy current and mobilization requirements. Furthermore, whenever a plant has potential excess, idle, or open industrial capacity, the Navy advertises this availability throughout the Department of Defense and Coast Guard in order to increase the effective utilization of Navy-owned facilities.

As a result of this continuing review over the past 5 years, the Navy has reduced its industrial holdings as follows:

Status	*Number of plants*
Government or jointly owned, contractor-operated plants reported as excess to GSA to be sold without national security clause restrictions	[1] 29
Government or jointly owned, contractor-operated plants reported to GSA as excess to be sold with national security clause restrictions	3
Government-owned, contractor-operated plants transferred to other departments (Army	3
Privately owned, privately operated plants removed from the industrial plant reserve	[1] 28

[1] Does not include 8 Navy-sponsored, Government or jointly owned, contractor-operated, and 26 Navy-sponsored, privately owned, privately operated (subject to national security clause restrictions), industrial plants removed from the national industrial plant reserve.

In addition to the continuing review, two other studies within the Department of Defense are currently under preparation by the Navy. One study compares the existing industrial capacity with the current and mobilization requirements on a unit basis. The other study requested by the Bureau of Budget, by direction of the President, requires the review of all activities under the commercial-industrial activities program with the goal of eliminating those activities which are producing a product or service which can be furnished by private enterprise.

Mr. THOMSON. I was very much intrigued by your comment about the different ways of killing a target and then when the chairman mentioned something about it, it looked like the submarines were the most effective way of proceeding against the submarine, your reaction and then your comment that that is what the submariners think.

It seems to me—I just wonder if you have that problem—that each person in each individual category within a particular service thinks he ought to have enough in his particular category to get the job done by himself. In other words, you ought to have enough submarines to meet the submarine menace, you ought to have enough airplanes chasing airplanes. Do you have a problem that way, Admiral?

Admiral BURKE. Not exactly that, but if we have any submariner in this Navy who does not thoroughly believe in submarines, he is misplaced. We encourage a submariner to believe that submarines are the most important part of the whole Navy. We encourage an aviator to feel that aviation is the most important part of the whole Navy. Of course, those of us who have been in destroyers realize——

Mr. THOMSON. That they will win the war?

Admiral BURKE. That destroyers also have an important part. Each group of the Navy or any other combat service has to feel that what they are doing is real important and that the whole Navy effort is balanced.

Mr. THOMSON. I certainly agree with you. But then I think that within the Navy it becomes your prerogative and your duty that you and the Secretary here get a balance of that so we do not get too big an agency built up.

Admiral BURKE. That is correct.

Mr. THOMSON. Similarly, and I am pleased to see you have supported this proposition, it becomes the job of the Secretary of Defense and the Chief of Staff and the Joint Chiefs of Staff to consider the

composite of what each service is able to contribute to the defense and security effort.

Admiral BURKE. I agree.

Secretary FRANKE. Yes.

SINGLE SERVICE AND SINGLE PROMOTION LIST

Mr. THOMSON. Some of us have been thinking of a single service with one promotion list as the only way to eliminate interservice rivalry. I have heard that some Navy people do not agree. I would appreciate your comment as to why it is not moving in the proper direction.

Admiral BURKE. Not moving in the proper direction or not moving to a single service?

Mr. THOMSON. Why going to a single service would not be moving in the proper direction.

Admiral BURKE. I will comment on that.

(The information to be supplied follows:)

STATEMENT REGARDING A SINGLE SERVICE AND CONSOLIDATION TO A SINGLE OFFICER'S PROMOTION LIST

The Navy endorses the Joint Chiefs of Staff system and believes that this system is the best to insure unified combat operations in the field and sound strategic decisions at the seat of government.

The Navy endorses the intent of Congress as stated in the National Security Act, not to establish a single Chief of Staff or an Armed Forces General Staff and not to merge the separate services. We are convinced that adoption of any of these three concepts, however they may be disguised, would constitute a threat to our form of government. They would give us less combat effectiveness at greater cost. They would contribute to a gradual overall decline in the efficiency and effectiveness of U.S. seapower at a time when sea supremacy is becoming more essential to our survival than ever before.

Today and as far into the future as we can see neither a single service, nor a single uniform, nor a single consolidated officer promotion list is in the best interest of the United States anymore than I think a consolidation of the legislative and executive branches of the Government would be to the best interest of the United States even though there are differences of opinion occasionally.

The Navy supports the present legally established defense organization and is joining with our sister services and other agencies to make it work.

ELECTRONIC AND COMPUTING EQUIPMENT

Mr. THOMSON. I would also like you to submit for the record a list of all contractors you presently have contracts outstanding with for electronic and computing equipment. That is, those from whom you are presently buying.

(The information to be supplied follows:)

Rental contracts for electronic data processing equipment are in existence with (*a*) Sperry-Rand Corp., (*b*) International Business Machines Corp., (*c*) Burroughs Corp., (*d*) Radio Corp. of America, (*e*) National Cash Register Co.

LOAN FUNDS FOR CAPEHART HOUSING

Mr. THOMSON. There has been a concern of mine, because I think the program is very effective, as to the Capehart housing program coming to a halt because of the unavailability of loan funds. I would like to know if that is a problem and, if so, what is the outcome.

Admiral BURKE. Capehart housing?

Mr. THOMSON. Yes.

Admiral BURKE. Very well.

(The information to be supplied follows:)

CAPEHART HOUSING LOAN FUNDS

Our fiscal year 1958 Capehart housing program consisted of 6,574 units and the fiscal year 1959 program consisted of 4,691 units, making a total of 11,265 units. Financing has been obtained for all of the projects with the exception of one for 19 units at Naval Facilities, Nantucket. This project is not yet under contract, not due to lack of financing, but because of other problems with the contractor who was successful bidder. Our fiscal year 1960 program consists of 4,360 units. We have not as yet reached the point where financing is required for these projects, however we do not anticipate any insurmountable problems in financing. The fiscal year 1961 program consists of 3,790 units and will soon be presented to the Congress.

COORDINATION WITH OTHER SERVICES

Mr. THOMSON. I heard you mention the importance of your supporting missions to other services. Having once been in one of those services that was once supported, I agree. I would like to know what coordination, if you would comment briefly for the record, you go through with the supporting forces as to finding out what kind of support they want, the degree they want to be supported in computing the overall budget.

Admiral BURKE. Would the example of the Marines and the Navy be a good example?

Mr. THOMSON. I think the Army and the Navy would be a little better example for the purposes of this record.

Admiral BURKE. Very well, sir.

Mr. THOMSON. I know you do coordinate there but I think it would be interesting very briefly to have it on the record.

(The information to be supplied follows:)

COORDINATION WITH THE ARMY

1. Coordination of training exercise requirements

(*a*) Each year at the request of CNO, the Chief of Staff, U.S. Army, U.S. Chief of Staff, U.S. Air Force, and the Commandant of the Marine Corps submit their training requirements for services by fleet units during the succeeding 3 fiscal years. These requirements are referred to the fleet commanders in chief for comment and inclusion to the maximum extent practicable in their employment plans. These plans are then forwarded to CNO for review, consideration, and promulgation. Problem areas are coordinated, as feasible by staff level negotiations with the representatives of other services, and schedules are promulgated.

2. Coordination of operations

(*a*) The commanders of unified commands are responsible to assign tasks to, and direct coordination among their Army, Navy, and Air Force commands to insure unity of effort. The customary practice is to authorize direct liaison between the component commanders concerned in order to permit direct coordination between units participating in joint operations.

(*b*) Air and naval gunfire liaison companies are assigned Marine Corps and Army units to assist with the control of gunfire support missions.

3. Coordination of specialized training

(*a*) The Navy and the Marine Corps provide amphibious training to the Army. Schools are maintained by the Navy, both on the Atlantic and Pacific coasts. Marine landing force training units provide amphibious training to Army units in the field.

(*b*) The Navy in conjunction with the Marine Corps will provide training for Army helicopters in carrier operations.

4. Coordination of transportation

(*a*) Sea transportation for Army units is resolved by coordination between representatives of unified commanders, and the commander, Military Sea Transportation Service.

Mr. THOMSON. Admiral Burke, this $19 billion planning figure that was mentioned here, I would like to ask you what happens there due to each person being dedicated to his own division, his own branch, et cetera. Coming up with a figure like that, is that not about what would happen if I were to ask my wife how many fur coats she would like to have?

Secretary FRANKE. This is part of what you said before. Does not each branch of the Navy think it has the most important responsibility? Surely, this is true.

Mr. THOMSON. You have exercised your function as Secretary of the Navy to coordinate that in order to bring it to a composite defense effort?

Secretary FRANKE. That is right.

BACKUP FORCES FOR MARINE CORPS

Mr. THOMSON. General Shoup, I recall your stating you needed 234,000 men or personnel to meet a limited war situation and keep on fighting. You could then run into a general war situation. You said you had no backup in your present force to do this. Do not your Reserves constitute a backup? I think you said you had about 129,000 of them, replacements and that sort of thing, to back up that operation. Is not that the function of the Reserves?

General SHOUP. In the first place, I did not talk very plainly if what you say you understood is what you got out of what I said. If there is time, I can say where the 234,000 came from and what it was for.

Mr. THOMSON. You said with the 175,000 that you now have you can put three divisions and three wings in the supporting forces in action, but that you have no backup for replacements and that sort of thing. Is that correct?

General SHOUP. I said we could then not be able to man our stations and mobilize—in other words, we have Ready Reserves, our plan calls for 45,000 Ready Reserves, ready to go. They are the best I have ever seen. They are ready to take their places, I feel, with our combatant units. But 45,000 added on to 175,000 does not give us 234,000.

Mr. THOMSON. Two hundred and nineteen thousand.

General SHOUP. That means every station in the United States would be vacant except for civilians at the very moment we are expected to mobilize to go further.

Mr. THOMSON. Here you are assuming a limited war situation leading up to a general war proposition; is that correct?

General SHOUP. You mean my last statement?

Mr. THOMSON. When you get into this problem.

General SHOUP. That is right.

Mr. THOMSON. In that condition you have a period of warning that would enable you to increase the size of your force as that situation developed, would you not?

General SHOUP. We can increase the size of the force by Presidential action, whatever our share would be. If he increased it just for Marines, I presume he could say bring in the 45,000 or everyone we had available. I think the limit is a million for the present. We could have accessible to us all of the 175,000, plus 45,000.

Mr. THOMSON. I think the way you are discussing this is the way it would probably happen rather than as I commented when Secretary Gates and General Twining were here, somebody would have a bad dream some night and get up and say, let's push all the buttons. I think developing step by step like a Berlin that bounced the other way, somebody tries to put us out, we are not going to be put out, and so forth, I believe that is how we might most likely get into a very big problem. I believe your thinking is good on that. I commend you for it. I also believe in that situation you are also going to have not only a military buildup and change in atmosphere but to some extent a political change in atmosphere, which would give us a warning time to consequently get the Reserves called in and build up to the situation, should it develop, which all of us hope will not. That is why we want to see an adequate security force and defense posture here. I feel we do have and I congratulate the Navy for the way it has used the overall resources made available to it to make its full contribution to that defense posture.

Secretary FRANKE. Thank you.

Mr. FORD. Will the gentleman yield?

Mr. THOMSON. Yes.

MARINE CORPS STRENGTH DURING KOREAN WAR

Mr. FORD. What was the size of the Marine Corps at the time of or prior to the Korean war?

General SHOUP. We had 70,000 marines and we were on the way down to 60,000. I was Chief of Staff of the division that produced this two-battalion regiment that had to go to Korea, and the battalions had two companies apiece. That is what we had.

Mr. FORD. How high did you build up at the peak of the Korean war?

General SHOUP. I think approximately 250,000. I think we were that high. We could give you exact figures.

Mr. FORD. Give the specific number for the record. That is all.

(The information to be supplied follows:)

The Marine Corps peak strength during the Korean war was 19,536 officers and 241,807 enlisted, for a total of 261,343. This strength was achieved on September 30, 1953.

DISCUSSION OF PERSONNEL STRENGTH BY JOINT CHIEFS

Mr. FLOOD. On the same subject, General, if you were present, as you were supposed to be, when the Joint Chiefs discuss Marine problems, did the Joint Chiefs of Staff or does the Joint Chiefs of Staff consider it their province? But if they do or not, did the Joint Chiefs discuss the end force of the Marines and did the Joint Chiefs approve 175,000 for the Marine Corps?

General SHOUP. I did not become a member of the Joint Chiefs during the development of this budget.

Mr. FLOOD. That is a good answer for you. What about it, skipper?

Mr. FORD. That is what you get for being around so long.

Mr. FLOOD. See what happens when you hang around too long?

Admiral BURKE. The answer to this, sir, is that the discussion starts off always on manpower and the cost of manpower, then how that is going up, then whether or not we could afford to reduce each of the services. Presentations are made. In general, the Chiefs were generally opposed to reducing forces below their present levels, but in the process of the budget, which went on in many arenas simultaneously, we accepted reductions as being reasonable overall.

Mr. FLOOD. You will accept reductions around this town; you will accept anything or get out, General. Tom White is coming in tomorrow morning. I understand he is due to have his "talking to" for even daring to suggest that he liked a couple of B–70's. Tom has always been on the other side of this fight up until this time. The boys clipped Tom for a couple of B–70's. Of all people, Tom should know better. He went downtown to the Press Club and made a statement about it and, of course, I understand and you know what a crime that is around here. That is something new for Tom. Everybody else has been through it. Now it is his turn. You must not do that. Sure, you accept it. I know that, Skipper, because that is the end of the line. But don't think—at least out loud—or "off goes your head."

Mr. LAIRD. Let me get this straight. This is not a force reduction as far as the Marine Corps is concerned, is it?

Admiral BURKE. No.

Mr. FLOOD. It depends on which came first, the chicken or the egg. Where do you start?

Mr. LAIRD. I thought the Marines were at 175,000.

Mr. FLOOD. They were at 175,000 according to the White House and the Bureau of the Budget but not according to Congress. I am talking about what we thought we did. We were laboring under the impression——

Mr. LAIRD. You are talking about funds and I think the admiral was talking about end strength.

Admiral BURKE. Yes.

Mr. FLOOD. I am talking about both. I am laboring under the impression that we passed a law. I am also under the impression that we have the three different branches of government. I question, of course, the constitutionality of much of this prerogative, acquired or assumed, by the executive on this question of allocation and expenditure of appropriated funds. That is another problem.

We did pass a law in which we said "200,000 marines." This is not the figure that came out. So anything below 200,000 to me, based upon the act of Congress, is a reduction of the end strength of the Marine Corps. I know all about this business of what is the end strength. I have been through it for 10 years. We said "200,000" in Congress. Anything below 200,000 is a reduction in force, end strength, to the Marine Corps. I want to know: Did the Joint Chiefs of Staff do anything else other than accept what came back to them from topside as end strength for the Marines?

Admiral BURKE. The Joint Chiefs of Staff discussed manpower force levels in all services and they expressed their views through the Secretary of Defense.

Mr. FLOOD. Their views did not include 175,000 for the Marines? The Joint Chiefs of Staff wanted 200,000. I remember. I have the information, be sure of that.

Admiral BURKE. Maybe you are right.

Mr. FLOOD. Sure, I am right. The Joint Chiefs of Staff, 200,000; Bureau of the Budget, 175,000. Happy new year. You fight it. The Bureau of the Budget will be behind the Marines—5,000 miles behind them.

ADVANCES IN ANTISUBMARINE WARFARE PROGRAM

Mr. MINSHALL. Admiral, at the risk of being repetitive and belaboring several points, I am going to ask several questions. One of them pertains to the antisubmarine warfare program. I believe it was in your statement, or maybe in the special statement given on the antisubmarine warfare program, that significant advances have been made in that program, and I wonder if you could explain them for the record, give us the dates, and what has been done.

Admiral BURKE. Yes. We have some new torpedoes now that are very much better. We have antisubmarine warfare homing torpedoes that can go faster and deeper. They can be used by surface ships, aircraft and submarines.

We also have made quite significant advances in sonars for ships. In the surface ships we have gone to the SQS–4, which we thought was a good sonar 5 years ago. We put a modification on that, which has increased its range.

(Statement off the record.)

Mr. MINSHALL. Can you give us some comparative figures as to how much more effective you are now than you were 3 years ago? You can go off the record, if you wish.

Admiral BURKE. Off the record.

(Discussion off the record.)

Mr. MINSHALL. You originally said that one of the weak links in our entire Navy defense was perhaps our antisubmarine warfare program, and that is why you have given it such top priority, but at the same time you also said in order to bring, even with the present state of the art, our antisubmarine warfare up to effectiveness it would be practically prohibitive because of the great number of ships, and other equipment that it would take. Is that correct?

Admiral BURKE. Not quite. What we are going to have to do is to back fit as much of this equipment as we can. That is what we are doing in the FRAM program.

(Statement off the record.)

Admiral BURKE. If these developments work out we will be able to do much better against submarines than we are able to do now. You will never be able to control the submarine menace absolutely. It is a war of attrition.

Mr. MINSHALL. How much more would you have to increase your antisubmarine warfare fleet, as it were; how many times over would you have to increase it to get it anywhere near effectiveness?

Admiral BURKE. It is somewhere near effective right now. What is needed is more money for sonobuoys, more money for back fitting new equipment, more money for FRAM ships. The faster the money is available the faster we will increase our effectiveness.

I would like to reiterate again that there is no absolute defense against submarines, nor aircraft, missiles, or anything else. You cannot build a defense in mechanism which is absolute.

ROLES OF MISSILES AND AIRCRAFT IN FUTURE

Mr. MINSHALL. Throughout these hearings we have had considerable testimony from the Secretary of Defense and on down—and even last year they stated this, and again I see it coming up—how the emphasis is going to be on missiles and the airplane is going to take a lessening role in our air retaliatory capability, our air defense, as it were. I wonder if you would care to comment on that?

Admiral BURKE. There is no doubt about it, missiles will some day replace manned aircraft for the destruction of fixed targets in known locations that require weapons of mass destruction. Aircraft will still be required for targets whose locations are not known, the search and attack type mission.

(Statement off the record.)

Admiral BURKE. Aircraft will also be required for reconnaissance. In more limited wars where you need close air support for troops you have to have precise delivery of weapons. You have to have a thinking pilot in the air who can use judgment whether or not to attack.

In those circumstances aircraft will be used for a long, long time. Now, we do not see any way missiles can replace manned aircraft for those missions.

Mr. MINSHALL. Why not?

Admiral BURKE. Because the man on the ground at the missile control station does not see the target area like a pilot could. He does not know what to attack or not attack unless it is a preplanned fixed location target. The missile has no judgment. It can only go to a predetermined spot and explode. If you have a target in a known location missiles will be very valuable and can do the job.

Mr. MINSHALL. You are coming back to the old argument you are going to need aircraft for so-called limited war, but you are not going to need them for general strategic wars.

Admiral BURKE. Not against fixed targets in known locations.

Mr. MINSHALL. You made a statement a moment ago and said that the manned aircraft would soon become obsolescent and be replaced by missiles.

Admiral BURKE. No, sir. Against big targets in fixed positions in known locations, they will be replaced by the missile.

Mr. MINSHALL. In how many years, do you think?

Admiral BURKE. It will not be very many years.

Mr. MINSHALL. Two, three, four, or how many?

Admiral BURKE. I would like to defend SAC on this. You will still need SAC aircraft for these search and attack missions. You will still need SAC aircraft.

Mr. MINSHALL. How much credence do you give Mr. Khrushchev's statement that they are cutting down on their aircraft?

Admiral BURKE. He usually tells the truth. When he says, "I intend" that I do not believe, or when he gives a reason why he does things, I do not believe it, but when he says, "This has happened," I do believe it. It can be verified.

USEFULNESS OF RECONNAISSANCE SATELLITE

Mr. WEAVER. In view of your statement, what comment would you have then with regard to the effort of the Air Force to get a reconnaissance satellite?

Admiral BURKE. I think it is very important. A reconnaissance satellite is important not only to the Air Force but also the Army and the Navy. We will require the data just as much as they.

Mr. WEAVER. As far as seeing the targets is concerned? They are supposed to have eyes to pick up everything.

Admiral BURKE. I have flown reconnaissance missions and it is very difficult to see what is on the ground at 14,000 feet and know what it is. You do not know whether it is a dummy installation or a real installation. You do not know whether a missile launcher is camouflaged completely.

A satellite will be flying some 300 miles in the air probably and regardless of the type of camera it would not be as good as photographic aid at 14,000 or 15,000 feet. There is also the interference due to weather and a lot of other things.

Mr. WEAVER. Would you say then to some extent when reconnaissance satellites are in being there would be less of a need for manned aircraft than without them?

Admiral BURKE. Oh, yes; somewhat less, but how much less I do not know. If we could photograph all of Russia every morning that would be an awful lot of photographs. The problem of going all over the data received and picking out the significant points is going to be terrific. It is a problem we will probably be able to solve some time.

Mr. MINSHALL. You stated earlier in your testimony that this country has at the present time the capability of completely destroying the Soviet Union and its military installations, and making them take more damage than they would accept. I just wonder whether or not you think we might have an overkill capability in that regard.

Admiral BURKE. Of course that is a big argument, how much is enough, and judgment enters into this. Judgment enters into how much does it take for an enemy to decide that he does not want to take the risk.

Mr. MINSHALL. There is no doubt in your mind then we have adequate military capability to destroy the enemy?

Admiral BURKE. There is no doubt.

Mr. MINSHALL. If anything, the only question in your mind is we have an overkill capability?

Admiral BURKE. Yes. We have an assured capability of destroying him.

FUTURE MISSIONS OF AIRCRAFT CARRIERS

Mr. MINSHALL. In requesting funds for a carrier which takes 4 years to build and which has a 20-year life, you are asking Congress to plan ahead with you for a 24-year period. At the same time you

have not made known several pertinent factors in planning anything more than 2 or years ahead.

Specifically, what will be the role and mission of an aircraft carrier 20 years from now?

Admiral BURKE. It would be like it is now. It will contribute greatly to general war capabilities. It will contribute greatly to limited war. I see no way we can eliminate the need for manned aircraft in limited war.

Mr. MINSHALL. Even with the fast-changing trend to missiles?

Admiral BURKE. Yes, because you need a man with judgment. You need the close support.

Mr. MINSHALL. What kind of aircraft will be used on these carriers 20 years from now?

Admiral BURKE. I think they will be very similar to the A2F we are getting. They will be capable of low-level delivery, long time on station, carrying heavy loads of either nuclear or conventional weapons, and they can go fast.

Mr. LAIRD. It was called to my attention by a picture in a San Francisco newspaper that one of the capabilities that a carrier presently has is the transportation of collectors' items. Have you seen this photograph [handing]?

Admiral BURKE. Unfortunately, yes.

Mr. LAIRD. I wonder if that is a normal practice. I do not think that is very good publicity for the use of a carrier, to transport Chinese junks back to the United States.

Admiral BURKE. No, sir; I agree with you.

Mr. MINSHALL. I just want to add it is most reassuring to me, as a member of this committee, to know you share Secretary Gates' view that our present military posture is adequate, not only for present-day needs, but for the foreseeable future.

I thank you very much.

COMPARISON OF ESTIMATES AND APPROPRIATIONS, 1956–61

Mr. FORD. I think that it would be helpful for the record—and Admiral Beardsley can supply it, or Admiral Ensey—to give us for the fiscal years 1956 through 1960 the annual amount recommended in the budget for the Department of the Navy in one column and another column showing what was the amount appropriated by the Congress each year.

Admiral ENSEY. In the President's budget?

Mr. FORD. The President's budget in one column and the congressional action in another column. Show the difference for each year, whether up or down, and then the total difference for the period of time. I suspect that you should break it down for the budget that we have before us, and the amounts for military construction.

(The requested tabulation follows:)

Comparisons of President's budget and congressional appropriations

[Fiscal years 1956-1961—In million dollars]

Fiscal year	President's budget request			Enacted by Congress			Difference		
	Total	Other than military construction	Military construction [1]	Total	Other than military construction	Military construction [1]	Total	Other than military construction	Military construction [1]
1956	9,681	9,124	557	9,542	9,071	471	−139	−53	−86
1957	10,213	10,031	182	10,164	9,989	175	−49	−42	−7
1958	11,210	10,865	345	10,500	10,235	265	−710	−630	−80
1959	11,366	10,998	368	11,783	11,480	303	+417	+482	−65
1960	11,361	11,108	253	11,220	11,007	213	−141	−101	−40
1961	12,013	11,816	197						

NOTE.—Excludes ships' stores profits, navy and preparation for sale or salvage of military property, Navy.

[1] Includes military construction, navy and military construction, naval reserve (Forces).

Mr. FORD. I would like to add to what has been said before, I think the hearing has been very helpful. It has been a fine one, a fine presentation. I thought the special presentations on antisubmarine warfare and on the carrier were very good.

MARINE CORPS CLOSE AIR SUPPORT

Mr. WEAVER. I would like to ask General Shoup about this: At Iwakuni, Japan, I observed some of the landing and takeoff mats the Marines were using. Lights and reflectors were set up with all the characteristics of landing and taking off on a carrier. Can you tell me what success the Marines are meeting with that type of equipment and what your plans are to give you greater mobility in that respect in the future?

General SHOUP. We have to have close air support and a close air support from attack planes cannot always come from carriers. We have to get the plane ashore. In the areas that we have to be able to fight there are not the airfields that will take these planes properly. All of this results in what we call short airfield tactical air support. That involves the arresting gear, the takeoff gear, the attack planes that have the jet assist, and connected with that is also the requirement for the field. One of our main problems has been just to figure out what it takes to carry the material into an area for making an airfield. It is stupendous in terms of ships, tonnage and engineering organizations, and further the length of time required to do it after you get there is such that in many cases what we went in to do would probably be over with. What you saw, without a doubt, was their training in being able to land on a carrier. You know, our marines go right aboard the carriers and support us in the initial stages of landing, and then get ashore to continue to assist us if the job takes that long. What this means is that we are trying to get through the fiscal year 1961 with about 30 percent of the funding required for what we call our midrange objective which is nine complete fields of this type. It is a costly thing, but nowhere near as costly as a concrete runway that will take these jets.

Mr. WEAVER. Could this possibly reduce some of our carrier requirements?

General SHOUP. No. It does not reduce the carrier requirements. We have to get the planes there. The reduction in the carrier is not related to the number of airfields that we put ashore. That is simply for the attack aircraft we will need to continue to support us so that the carriers can go on to another job.

Mr. WEAVER. Thank you very much. I want to just say to Admiral Burke and you that during my trip last fall I was certainly pleased with the caliber of people that I met in the Navy, enlisted and officer personnel, as well as the marines, and I feel confident that they can do any job that is assigned to them.

Mr. FORD. A question has been prepared and submitted to me by a member of the committee. The question is directed to Secretary Franke. I think that it asks for certain information that should be included in the record.

(The question and answer referred to follow:)

Question.—On page 9 of your statement, you indicate a reduction of 40,000 in civilian employment since June 30, 1957. This implied trend does not seem to be borne out precisely by the budget figures, and contrary to that apparent trend, the estimates for 1961 indicate an increase in civilian employment.

(*a*) Permanent positions for fiscal 1960, as shown in the 1961 budget total about 35,000 less than fiscal 1957, but are projected to increase by about 1,000 in 1961.

(*b*) Average employment for fiscal 1960 totals about 35,000 less than 1957, but increases by 3,100 in 1961.

(*c*) Employment, end of fiscal year is projected at 34,700 less on June 30, 1960, than on June 30, 1957, but is scheduled to increase 6,800 between June 30, 1960 and June 30, 1961.

These employment figures include operations and maintenance, Marine Corps, and are taken from the Budget documents for the years 1959 and 1961.

Answer.—The Department of the Navy's civilian employment as of June 30, 1957, as reported to the Civil Service Commission and the Congress, totaled 389,717. The Navy's planned end-fiscal year 1960 civilian employment, funded from all sources, as provided for in the President's budget is 350,043. This represents a reduction of 39,674 from the Navy's June 30, 1957, strength.

The downward trend in the Navy's civilian employment is continuing through fiscal year 1961, both with respect to end-year and average employment, as indicated by the following table.

	Planned end fiscal year employment	Average number of employees in fiscal year
Fiscal year 1960	350,043	352,415
Fiscal year 1961	348,906	347,852
Reduction in fiscal year 1961	−1,137	−4,563

All figures include total Navy and Marine Corps civilian employment paid not only from "Operation and maintenance" appropriations but also from procurement appropriations, revolving funds, and all sources.

Mr. FLOOD. If everybody is through telling you how good you are, and that is good, I agree with what the boys have said.

MILITARY ATTITUDE TOWARD NATIONAL INTELLIGENCE ESTIMATES

Now, since Tom Gates left here I have taken it upon myself through my varied and weird sources of information to find out what the military concept is, the military attitude, among our NATO people and among the Germans about this theory now of what the enemy is going to do as the basis for our national defense structure. My information is that there is no military opinion worthy of the name in the world, up until 2 o'clock today, who thinks that is sound and proper.

I do not want to get engaged in this numbers game about missiles. You have made speeches about that at the Rotary Clubs and I know what you think about that. That is not what I am talking about at all. You have made it very clear about balanced forces. We know all about bombers and missiles. If we do not in this room, nobody ever will. That has been clearly expounded.

We wound up with former Secretary McElroy giving us 3 to 1 Russian missiles against ours. McElroy is barely out of town, and this missile gap is reduced. Nobody says under this new theory that the Russians do not have 3 to 1. That premise is still sound, for what it is worth, but it is no longer as important as it was 6 months ago; not because we have more bombers, not because we have got more missiles, not because the Russians have less, the facts are all the same, the physical facts. The numbers racket business is still the same, generally speaking. But in order to reduce this gap, in order to make everybody feel happy, in order to justify this budget, in order to have a good defense argument here for the Nation and the people, for whatever purpose anybody might have in mind, but not you, somebody reaches off of the left field wire and comes up with this idea: "Boys, there ain't no missile gap. Forget the physical facts, there ain't no gap any more." Do you know why? Because we have just changed the rules. We did not consult the Russians. Unilaterally, without talking to anybody at NATO—and this has not been discussed at NATO, or any place else, somebody gave birth to this theory and I think it is an abortion, and they gave birth to it in the last couple of months. Do not worry about it. "Everything is going to be all right. Never mind the 3 to 1 ratio." Why? Because it is no longer important. The important thing is—what is he going to do, the other fellow? And because of the way we analyze his capability of what he is going to do, what we think he is going to do, therefore, the numbers game is over. That is outmoded if it ever existed in responsible military circles. Now we have the crystal ball theory—palm readers, and so forth—as Hitler reached decisions.

My information is it does not exist in any staff in the world today.

I would like to know what the uniformed people, the three Joint Chiefs, think as our opposite number of all of the military brains in the world, all nations including NATO, all who do not accept this premise, think about this. Does the U.S. Joint Chiefs of Staff embrace the theory now? They are the only ones who do if they do. Do you embrace it?

Admiral BURKE. Yes.

Mr. FLOOD. Oh no!

Admiral BURKE. This ought to be off the record.

Mr. FLOOD. There is no change in the figures. That is my basic premise, that there is no change in anything except the state of mind.

Admiral BURKE. I read General Twining's presentation that he gave before this committee and I concur in that presentation, and I concur in General Twining's remarks. I do not know what he said in the question.

Mr. FLOOD. What do you think he said?

Admiral BURKE. I think he said that you cannot judge what the Russians, or anybody else is doing, or will do, solely on the basis of their maximum capability to do it. Now, we have made gross errors in the past by using the old system. For example, we said at one time that the Russians have the capability for building hundreds and hundreds of long-range bombers. They did not do it. We built a lot, but they did not.

(Statement off the record.)

Mr. FLOOD. They did not build bombers. This is fantastic. They did not build bombers, not because they did not have the capability, not because your intelligence was wrong about their capability; they stopped building bombers because they started to build missiles.

Now with regard to submarines, they did not stop building submarines because they did not have the capability. They did not stop building submarines because your combined intelligence was wrong. They stopped building the kind of submarines they were building because they started to build an entirely different kind and had to take a 2-year gap to do it. You told me.

Admiral BURKE. I told you part of that.

Mr. FLOOD. What part of it did you not tell me?

Admiral BURKE. They actually built submarines in 1956. They had the capability to continue, but what they did do? They got a large number of submarines and then they stopped and they went into new production, but their new production is much less. They will build submarines at some lesser rate to replace probably the submarines they now have and keep their submarine force about level. You can get a capability on a crash program and be completely misled. You can also be completely misled in other ways. I do not deny that.

Mr. FLOOD. Either one of these premises can mislead you like any premise?

Admiral BURKE. Yes.

Mr. FLOOD. So you are going to take the one with the greatest risk in it.

Admiral BURKE. No.

Mr. FLOOD. You are. The new one is an admitted calculated risk based upon the potential of the enemy's intention.

Admiral BURKE. No, sir.

Mr. FLOOD. What else is it?

Admiral BURKE. No matter what Russia does there is no possibility she can avoid destruction. She is going to get a terrific beating if she starts a war, no matter how or when.

Mr. FLOOD. So we are even on that. We are both going to get clobbered.

Admiral BURKE. That is going to happen.

Mr. FLOOD. What has that to do with what I am talking about?

Admiral BURKE. It has this to do with it—if she builds 500 missiles or 2,000 missiles and does it in 7, 8, 10, or 15 years, sometime in the future, it does not affect our deterrent capability.

Mr. FLOOD. We have been through that. That is overkill talk. We had a big meeting on that last year, a complete presentation on the theory of overkill vis-a-vis the missiles of both nations.

Admiral BURKE. It is not overkill.

Mr. FLOOD. It is not much different. That is still not what I am talking about. This theory I do not believe. This is terrible.

Admiral BURKE. We have no evidence that Russia is bulding ICBM's in large numbers. We do not know they are not building large numbers of ICBM's, but we know if they build up to their maximum capability they would have to put in a crash program.

Mr. FLOOD. I know you are the top naval dog, and do you mean to tell me that because you do not have exact intelligence on the number of ICBM's they have that you are not figuring their capability to produce X number, and you are not giving them a figure?

Admiral BURKE. Yes.

Mr. FLOOD. Of course you are. You have been doing that for a hundred years. Why did you change?

Admiral BURKE. But you get that capability, and then that does not indicate what they have done, and you do not base your war plans and other considerations on the maximum capability.

Mr. FLOOD. You do not?

Admiral BURKE. I would have never gone into battle anywhere if I had assumed the enemy would put forth maximum capability.

Mr. FLOOD. I know, that is the other extreme, but you have gone to the other extreme here in the last 90 days under this new concept of our defense posture.

Admiral BURKE. No.

Mr. FLOOD. You have not?

Admiral BURKE. No, sir.

Mr. FLOOD. We are the only nation in the world, as far as I am able to establish—and I am going to try—that thinks this way. Everybody else thinks you are wrong, and you have come up with this one in 90 days in order to balance the budget.

Admiral BURKE. No.

Mr. FLOOD. I never heard of this thing. I am advised that there is not a war college in the world, including our own, that ever talked of this in the last hundred years, no place in the world, including West Point, Annapolis, the Air Academy, and your own war colleges. They do not teach this theory today. How do you like that? That is it. The word has not gotten out yet. This is dangerous business, Skipper.

Admiral BURKE. It is dangerous if you go to any extreme.

Mr. FLOOD. Yes.

I do not want to go to any extreme.

Admiral BURKE. And if you go to the extreme of assuming the maximum capability on everything it becomes hopeless.

Mr. FLOOD. When you are hanging the defense of the United States of America, which the Secretary of Defense did here Monday, on this theory, you are loaded.

Admiral BURKE. No, sir. That theory is based upon the best intelligence all our whole intelligence community has been able to develop, and it is good.

Mr. FLOOD. You never thought this yourself until 90 days ago. You have been trained in the old school like all of the admirals and generals in the world. The original concept of this theory goes back to the 10th legion when they put shields over the spears. This is as old as Methuselah. You abandoned this 1,000 years ago.

Admiral BURKE. No.

Mr. FLOOD. Now you are dusting it off to balance the budget. No destroyer commander thinks this.

Admiral BURKE. Yes. You cannot base all of your plans, all of your data, on what the maximum capability is.

Mr. FLOOD. I am not talking about maximum capability. I agree with you. That would be fantastic. You would surrender.

Admiral BURKE. That is what the old system was.

Mr. FLOOD. No, this is the one that does it, not the old one. To save your troops you would have to quit. You cannot do that. This theory is philosophically unsound by tradition, practice, and acceptance, and there is not a military academy in any nation of the world up until 2 o'clock today that teaches it. If you do from now you will have to change your whole philosophy for the defense posture in the United States, including West Point at 2 o'clock. People do not know this.

ROLE OF NAVY IN SPACE EFFORTS

Mr. FORD. I have another series of questions that relate to the statement of Admiral Burke.

I noticed in your statement, Admiral, that you spent a portion of your time commenting on Navy's space efforts. It is my recollection we did not have that kind of presentation to that extent in the past. Do you want to amplify what you said here in reference to the role of the Navy in space?

Tell us about the funding in the past, the extent of the funding in the budget for 1961.

Admiral BURKE. Yes. We have two projects now which are very far along. The SPASUR surveillance system is the detection system by which we can detect and compute the orbits of all satellites in flight. That is a very good system. We also have a navigational satellite which is ready to go and which we have developed, and we are now waiting until we can get it into space. We have great interest in the other satellites. We have a great interest in a communication satellite because we may be able to use a communication satellite for both high frequency and low frequency line of sight types of communication which will give us much more secure and faster communications under many conditions.

Mr. FORD. I would like to have some material in the record showing Navy's efforts, dollarwise and otherwise, in the space field. I assume all of it except the VANGUARD has been in research and development?

Admiral BURKE. Yes.

Mr. FORD. Leave VANGUARD out because I think that was in a little different category. I would like to know just what the trend

is; what the background is; what the future is for the Navy in the area of space exploration.

(The matter referred to follows:)

THE NAVY'S CONTRIBUTIONS TO SPACE

The Navy has long been alert to the contributions which utilization of space technologies could make to naval effectiveness. Consequently, the Navy has developed over the years technical inhouse competence and practical experience in meteorology, electronics, rocket propulsion, cosmology, human engineering, medicine, and a host of other areas which are contributing very significantly to our Nation's accomplishments in space.

Control and utilization of the vast oceanic areas of the earth will depend to an increasing degree on the efficient use of space technologies for naval purposes. It is in the national interest that the Navy, in partnership with other agencies, continue to participate fully in development of military space technologies, particularly in those areas essential to our Nation's sea supremacy and maritime security.

The following examples are illustrative of the extensive background of the Navy's research related to space which is now proving significant to our national space effort:

1946: Project SKYHOOK for upper atmosphere and physiological research; cost $2 million over 10 years. Current project STRATOLAB is pursuing similar scientific aims.

1946: Nose cone firings from V-2 rockets for cosmic rays and other research; cost $300,000.

1947–49: AEROBEE rocket probes to high altitudes; cost $546,000.

1948–53: Project VIKING for high performance rocket motor development. The rotating rocket motor nozzle used in several current space vehicles was first developed under this project; cost $3.5 million.

Other space related endeavors included: Solid propellant research, VANGUARD, moon communications relay, water impact experiments, reentry research in support of JUPITER, ATLAS, etc., Mini Track (orbital determination), Big Dish, astrophysics, etc.

CURRENT NAVY SPACE PROGRAMS

Space surveillance system

The Navy space surveillance system (SPASUR) referred to as the Dark Fence because of its ability to detect and obtain orbital data on nonradiating satellites. SPASUR has been developed under the sponsorship of the Advanced Research Projects Agency by the U.S. Naval Research Laboratory. All earth orbiting satellites are under constant observation by the SPASUR system, and any new earth orbiting vehicle which crosses the "Fence" will immediately be detected and added to the display pattern.

The SPASUR system is currently furnishing operational satellite data to the fleet, so that tactics and countermeasures can be perfected.

Navigational satellite (TRANSIT)

Project TRANSIT covers the development of a navigation system based on the use of the doppler shift in radio frequency signals transmitted from earth orbiting satellites. This project is sponsored by the Advanced Research Projects Agency and administered by the Bureau of Naval Weapons. Of special interest is the fact that the TRANSIT satellite will furnish worldwide coverage. Present radio frequency ground station systems are limited in coverage by the transmitter radiation pattern.

Pacific Missile Range

The Pacific Missile Range, managed by the Navy, is one of the three national missile ranges. The others include White Sands Missile Range, N. Mex., under management of the Army; and the Atlantic Missile Range, Cape Canaveral, Fla., under management of the Air Force. The mission of the Pacific Missile Range is to provide range support for the Department of Defense and other designated Government agencies in guided missile, satellite, and space vehicle research, development, evaluation, and training programs.

Balloon research

The Navy has an extensive program of manned and unmanned balloon research under project STRATOLAB. It is possible to do much space research at the upper fringes of our atomosphere from balloons at a mere fraction of the cost and with infinitely greater safety than from satellites. Recent Navy observations confirming the existence of water vapor on Venus are an example.

Vertical probes

The Navy has an active high altitude probe program extending from AEROBEE-HI, through Projects VANGUARD and ARGUS, into the future. Project ARGUS was the experiment conducted last year by a Navy force at sea in the South Atlantic to determine the effects of nuclear explosions at very high altitudes. The Navy's ability to launch vertical probes from anywhere in the vast sea areas of the globe makes this a particularly valuable project. Since the power requirements for a vertical probe are much less than those required to orbit a satellite, a great amount of valuable scientific and operational data can be acquired by this means at relatively low cost. Local photographic and weather reconnaissance are examples of what can be achieved by vertical probes.

Communication satellites

The Navy, in exploiting the global ocean areas of the earth, has many requirements for communication satellites. Accordingly, the Navy is cooperating with the Department of Defense communications satellite program now being managed by the Army.

Weather satellite

The Navy has a very urgent requirement for better weather information in its worldwide operating areas. It is expected that such information may be obtained by the use of weather satellites now under development by NASA. The Navy actively supports this project in many ways. The unique polar-launch capability of the Pacific Missile Range will be important in this project.

Reconnaissance satellite

The Navy needs the information which reconnaissance satellites will supply for its POLARIS missile forces, carrier striking forces, and amphibious forces. The capability to benefit from direct readout of data transmitted by these satellites is very important. Accordingly, the Navy follows with great interest the several reconnaissance satellite programs in the Department of Defense.

Under Project YO-YO, the Navy has under study a concept for a single-pass, photographic reconnaissance satelloid. Through the selection of sites and directions of launch at sea, such a satelloid can be programed to pass over any preselected point on the earth in its first pass and subsequently recovered at sea upon completion of a single orbit.

Air launch

During Project ARGUS high altitude nuclear bursts last year, the Navy was given an ARPA project to air launch small satellites as a backup space sampling system.

The air launch of small and nominal size satellites has many advantages since a high speed aircraft is substituted for the expensive first stage booster. The use of carrier-based aircraft for this purpose makes a tremendous area of the earth's surface available for use as launch points, with a free choice of launching directions well clear of populated areas.

POLARIS launch

The unique success, simplicity, and relative low cost of the Navy's solid propellant POLARIS missile makes it a logical candidate for partial modification as a satellite launching vehicle. This concept, which is under study, would give the Nation a sea launch capability with a complete choice of launch area and direction.

Operations and logistics support

The Navy has a major responsibility to render operational and logistic support over the sea areas of the world to all space programs, both military and national. Sea transportation, ship tracking stations, and safe sea recovery of capsules and booster stages are but a few of these operations.

Bioastronautics

The Navy full pressure suit and ventilation garment has been accepted for Project Mercury.

A Mercury capsule is being placed in the Navy Air Crew Equipment Laboratory's large low-pressure chamber. Here, under simulated orbital conditions, the astronaut will perform many of the operations required during actual space flight.

At the Naval School of Aviation Medicine each Mercury astronaut will be subjected to the programed flight patterns within the human disorientation device.

The Navy's centrifuge, dynamic flight simulator and high gravity sustaining devices are all programed to provide direct support for Project Mercury.

Payload subsystems

The Navy has continued to devote effort to payload subsystems which will perform a given task more efficiently or which will reduce the overall size or weight of a particular unit. Examples are infrared scanner devices, power sources, improved circuitry, memory devices, and sensors of various types. This philosophy is being followed in Project Transit where payload weight is being reduced from 270 pounds to 50 pounds to permit the use of the relatively inexpensive SCOUT booster as opposed to the THOR-ABLE.

With specific regard to subsystems, perhaps the most noteworthy has been the Navy's development of infrared scanners which are an outgrowth of the SIDEWINDER detection unit. These scanners were carried in the early PIONEER shots, and versions of them have been used in all space experiments where the requirement has existed for this type of unit.

Naval Observatory

One military organization that has concerned itself with space longer than any other is the U.S. Naval Observatory. The work and contributions of this organization in the extremely accurate plotting of celestial bodies for use as basic time and navigation standards is well known. The additional wealth of information on celestial mechanics and other related astronomical fields developed by the Naval Observatory is proving invaluable to U.S. space efforts.

FUNDING

The Navy's many contributions to the current national effort in space have been generated primarily as a bonus from many years of intense but normal research effort. It is not possible to establish a direct dollar relationship between the various research endeavors over the years and the actual dividend these endeavors are now paying into the national space effort. Actual dollars attributable to space and astronautics application are not readily identifiable. The various dividends which are accruing to national space progress derive from many categories of multifunctional effort and purpose. For instance, the direct dollar contribution to space progress by the Navy's development of moon relay communications, the NORC computer, the "Big Dish," etc., cannot specifically be stated. It is estimated that only about 1 percent of the total Navy budget contributes directly to space programs. Expenditures have been relatively small for the highly important benefits accrued.

Recent and current identifiable funding of Navy participation in space related activity is as follows:

Research and development funding

A. SPACE TECHNOLOGY

[In millions of dollars]

	Navy agency	Fiscal year 1959		Fiscal year 1960		Proposed Fiscal year 1961	
		Navy	Other	Navy	Other	Navy	Other
Navigation satellite	BUWEPS/APL		A 1.4		A 5.7	0.5	A 8.1
Space communications	BUSHIPS				A 2.1	2.8	
Space surveillance/detection	NRL		A 11.9		A .5		A 8.9
Infrared scanner	NOTS				A .2		
Solar radiation measurements.					A .3		
Celestial computations	NAVOBS					.4	
Booster recovery							
Capsule recovery							
Target surveillance (electromagnetic).	ONR						
STUDIES							
Magnus effect	BUAER		A .2				
Vulnerability reconnaissance satellite.	BUORD			0.04			
Effect on Navy space technology.	ONR			.04			
Antisatellite system	BUWEPS					.3	
Staff studies	ONR		A .5		A .2		
Maneuverable space vehicles.	BUAER, BUWEPS	0.4					
Analysis, studies and tests	BUWEPS					.5	
VLF satellite communication. (Panglass NMF funds.)	BUWEPS, SP			.5		1.0	
Space power	BUSHIPS		A .2				
Variable thrust and vector control.	BUWEPS				A 2.3		
Subtotal		.4	14.2	.6	12.0	4.8	17.0

B. RELATED TECHNOLOGY

Solid propellant research	BUWEPS		A 5.1		A 3.5		A 7.0
	ONR		A .6		A .3		
Materials research	NOL		A .1				
Ballistic missile defense	BUAER		A .02				
	BUORD		A .3				
	NRL		A .5				
	ONR		A 2.9				A 8.0
Space booster development	BUWEPS				N 1.1		N .4
Radio astronomy (COSMOS radio sources).	ONR			1.6			
Balloon and A/C soundings (COSMOS radiation).	ONR			.3			
High altitude rocket sounding (Aerobee-HI) & (Nike-ASP).	ONR			1.5			
Unmanned earth satellites (payload development).	ONR				N .3		
Communications (VLF, ECHO, satellite).	ONR			.4			
Biomedical research	BUMED	[1] 3.0		[1] 4.0		[1] 5.0	
	BUWEPS						
	ONR						
Related technology, subtotal.[1]		3.0	9.5	7.8	5.2	5.0	15.4
Total		3.4	23.7	8.4	17.2	9.8	32.4

[1] Approximate.

Symbols: A–Advanced Research Projects Agency. N–National Aeronautics and Space Administration.

Summary

[In millions]

	Fiscal year 1959	Fiscal year 1960	Proposed fiscal year 1961
Pacific missile range	$82.9	$122.8	$80.5
Space and related technology	3.4	8.3	9.8
Mercury recovery [1]		.7	3.4
Total	86.3	131.8	93.7

[1] Subject to reimbursement.

In our approach we have kept in close touch with the space research and development efforts of other agencies. We have contributed to them where we could, we have sought to learn from others wherever possible and we have done our best to avoid expensive duplication of the efforts of others. We are therefore confident that the Navy has given this Nation the very most in actual space progress for every space dollar expended. We are confident that we can continue to do this, because that is how we are trained and organized to conduct our business.

Mr. FLOOD. In view of the statement that I made, and the fact that you did not have time to state your position clearly, I think you would want to do it, and, of course, do that. I wish that you would assure me that it will be the expression of your opinion as the uniformed admiral of the service and not Mr. Franke's opinion and not the opinion of Mr. Gates or the opinion of any of the civilian people.

Admiral BURKE. I have great difficulty in expressing any opinion but my own.

Mr. FLOOD. That is good. With a name like you have it could not be otherwise.

PILFERAGE AT NAVAL BASES

Mr. WEAVER. When the admiral and I were talking about the Philippines you mentioned that there had been an improvement in the situation there. I wonder Admiral Burke if you could include in the record a general statement as to what has taken place.

Admiral BURKE. Yes.

Mr. WEAVER. Any comments you have as to any instructions from the Department of Defense to the Navy, or any instructions you might have passed on to your people there.

Admiral BURKE. Yes.

(The requested information follows:)

PILFERAGE OF U.S. NAVAL BASES IN THE PHILIPPINES

Improvement in the situation with regard to looting at U.S. naval bases in the Philippines has resulted from action taken by the commander in chief, Pacific, and other officers of the Navy and Air Force in the Philippines.

The problem of pilferage of U.S. bases was brought to the attention of the Philippine-U.S. Mutual Defense Board by CINCPAC representative, Philippines (CINCPACREPPHIL) in June 1959, in order to obtain the understanding and cooperation of Philippine forces in reducing plundering of U.S. bases. In August 1959, CINCPACREPPHIL published instructions concerning policy guidance for requesting assistance of the Philippine constabulary in the event of serious incidents involving security of U.S. bases. The cooperation of the Philippine constabulary has been of material assistance in reducing pilfering incidents.

On November 27 a meeting was called by Philippine Secretary of Defense Santos to talk about base security measures of all U.S. bases. At this meeting

mutual assistance was assured by United States and Philippine Government officials. An ad hoc committee was established to determine additional ways of improving joint United States-Philippine participation in security measures of the U.S. bases. In the measures, the U.S. Navy and Air Force have worked closely with the U.S. Ambassador, Philippines, to bring about a solution to the looting problem.

No formal security arrangements have been made between Navy and Philippine authorities. However, informal arrangements between COMNAVBASE Subic Bay and Philippine constabulary (PC) in Olongapo to provide for assistance of the base commander on call. PC men are currently paired with base police on a temporary assist basis protecting fleet training and recreation beach area installations. The Philippine National Bureau of Investigation (NBI) is actively pursuing extensive operations on the base against timber thieves with U.S. Marines involved only as guides. NBI activity has been highly productive. By December 1959 eight timber thief trucks had been impounded on the base and numerous apprehensions of Filipinos on the base had been made.

The renewed interest and cooperation of the Philippine constabulary is beginning to result in definite improvement. This appears due to direct interest taken in this problem by Philippine Secretary of Defense Santos at the November 27 conference. The increased use of dogs is quite effective, as thieves are more afraid of dogs than guards who are ordered not to shoot.

Mr. FLOOD. The committee will stand adjourned until 10 o'clock tomorrow morning, when we will take up the Air Force.

FRIDAY, JANUARY 22, 1960.

DEPARTMENT OF THE AIR FORCE

WITNESSES

HON. DUDLEY C. SHARP, SECRETARY OF THE AIR FORCE

GEN. THOMAS D. WHITE, CHIEF OF STAFF, UNITED STATES AIR FORCE

HON. LYLE S. GARLOCK, ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL MANAGEMENT)

HON. JOSEPH V. CHARYK, ASSISTANT SECRETARY OF THE AIR FORCE (RESEARCH AND DEVELOPMENT)

LT. GEN. M. E. BRADLEY, JR., DEPUTY CHIEF OF STAFF, MATERIEL, USAF

LT. GEN. D. C. STROTHER, DEPUTY CHIEF OF STAFF, OPERATIONS, USAF

MAJ. GEN. H. C. DONNELLY, ASSISTANT DEPUTY CHIEF OF STAFF, PLANS AND PROGRAMS, USAF

MAJ. GEN. R. J. FRIEDMAN, DIRECTOR OF BUDGET, COMPTROLLER OF THE AIR FORCE

MAJ. GEN. B. K. HOLLOWAY, DIRECTOR OF OPERATIONAL REQUIREMENTS, DEPUTY CHIEF OF STAFF, OPERATIONS, USAF

MAJ. GEN. B. J. WEBSTER, DIRECTOR OF PROGRAMS, DEPUTY CHIEF OF STAFF, PLANS AND PROGRAMS, USAF

COL. J. W. BAER, EXECUTIVE ASSISTANT TO THE SECRETARY OF THE AIR FORCE

COL. E. B. RASMESSEN, SPECIAL ASSISTANT TO THE CHIEF OF STAFF, USAF

Mr. MAHON. We will now begin the hearings on the Air Force budget for the fiscal year beginning July 1, 1960. The budget request is approximately $17.737 billion, which is lower than the previ-

ous year's budget. I believe this sum includes funds requested for military construction which are not considered by this committee.

It is quite obvious, Mr. Secretary, and you, General White, and the members of your organization, that this is going to be a rather interesting and controversial budget. In your program you have many programs of special interest to the committee and to the Nation. Questions which will be before us relate to the proposed B–70 bomber; for example, as to whether or not the program as proposed in the budget is the right one. Questions will be before us with regard to the so-called missile gap, and what are we doing and what we should do about the intermediate range ballistic missile program and the intercontinental ballistic missile program; what are the pertinent matters involved in the ATLAS and TITAN missile programs; should we expedite the production of the B–58 in order to have greater and earlier inventory of this aircraft during the early years of the decade which is just beginning?

In the presentation before our committee of the Secretary of Defense and General Twining we had quite a spirited presentation as to the military capability of the United States. It was obvious they wanted to make it clear that in their minds they thought the United States was strong and had a deterrent power which should deter aggression today and in the coming years.

The tone of the presentations drastically changed when we had the top-level presentation of the Navy. We heard a great deal about what the budget did not contain from the Navy. Warning flags were run up here and there as to dangers and probably rocks beneath the surface of the seas that might give us trouble.

The Chief of Naval Operations, in his statement, said:

> Each year it costs more to operate a slowly shrinking Naval Establishment.

That sentence provoked considerable discussion.

I am sure, Secretary Sharp, you do not wish to preside over a shrinking and declining and impotent Air Force, so we will await your report and statement with respect to the direction in the future of that proud arm of the service, formerly called the Army Air Corps and now called the U.S. Air Force.

There has been considerable discussion in the press as a result of Mr. Gates' statement before various congressional committees, including this one, as to our intelligence estimates and the new gimmick that has been introduced into our intelligence estimate. Newspaper stories and controversies in and out of Congress tend to stimulate interest and interrogation, as you can imagine, so no doubt we will be discussing those problems.

We cannot afford to underestimate our opponent. We cannot afford the luxury of complacency. You would not and we would not in any way tolerate a program which would in any way be associated with the policy of appeasement. We cannot afford to take undue and unnecessary chances with the present and future security of the United States.

So within the framework of those remarks we will be pleased to have your statements. We will not interrupt you for questioning during your statement. After your statements have been delivered, we will have a period of interrogation.

This is your first appearance, my fellow Texan, before the committee. I believe you hail from Mr. Thomas' hometown.

Mr. THOMAS. He is a very distinguished gentleman, and will surely be one of the alltime great Air Force Secretaries.

Mr. MAHON. We are going to be very interested as you appear before us for the first time as Secretary of the Air Force.

How long have you been in the Government service and in the Defense Department?

Secretary SHARP. I came here in October of 1955.

Mr. MAHON. Have you been here almost continuously since then?

Secretary SHARP. I was here all except 6 months.

Mr. MAHON. We are pleased to have you, and you may proceed with your statement.

GENERAL STATEMENT OF THE SECRETARY OF THE AIR FORCE

BIOGRAPHICAL SKETCH

Dudley Crawford Sharp became Secretary of the Air Force on December 11, 1959, after having served as Under Secretary from August 3, 1959.

Mr. Sharp was born in Houston, Tex., on March 16, 1905. He attended both public and private schools in Houston and completed his precollege schooling at the Gilman County School in Baltimore, Md. He was graduated from Princeton University with a degree of bachelor of science in 1928.

Immediately after graduation, Mr. Sharp joined the Mission Manufacturing Co., of Houston, Tex., as vice president. He was elected executive vice president in 1935, and became president in 1946, which office he held until his appointment as Assistant Secretary of the Air Force for Materiel on October 3, 1955. Upon his resignation from this position on January 31, 1959, he returned to Houston and served as vice chairman of the board of Mission Manufacturing Co. The Mission Manufacturing is engaged in the development, manufacturing, and distribution of equipment used in the petroleum industry. Mr. Sharp was appointed under Secretary of the Air Force in August 1959.

Mr. Sharp served in the U.S. Navy from 1942 to 1945. He was on sea duty in various capacities as executive officer and commanding officer on antisubmarine warfare vessels and later served in the Office of Procurement and Materiel with the Navy Department in Washington. He was relieved from active duty early in 1945 to assume the position of administrative manager of the Applied Physics Laboratory, Silver Spring, Md.

As Under Secretary of the Air Force, Mr. Sharp served as the principal assistant to the Secretary, Chairman of the Air Force Requirements Review Board and Defense Department representative on the Department of Defense-Federal Aviation Agency Advisory Committee.

Mr. Sharp was married to Tina Cleveland January 2, 1929, and they have two children, Dudley C. Sharp, Jr., and Julia May Sharp.

Secretary SHARP. Thank you, Mr. Chairman and members of the committee.

I am here to begin testimony on the Air Force portion of the Department of Defense budget for fiscal year 1961. This is my first appearance before this committee as Secretary of the Air Force, although we have become well acquainted during previous years.

If it please the committee, my initial effort in this role will be a fairly brief, general statement on the fiscal year 1961 Air Force budget, which totals $17,737 million in new appropriations requested. I will then ask General White to discuss the military implications of that budget. Secretaries Garlock and Charyk and certain key members of the Air Staff are also here to expand upon other important aspects of the budget as you may desire.

If I may depart from my statement a minute, I would like to point out the total amount that I have referred to, as well as some of my remarks, includes the military construction, as I think you mentioned, for the sake of completeness in this overall presentation since the construction estimates themselves are heard by a different subcommittee.

I would like to stress that the $17,737 million which we are requesting, while a very substantial sum indeed, will not provide for all that all of those concerned would like to see provided for. I doubt that any of our witnesses who will explain this budget in detail—whether they are discussing personnel, materiel, operations, R. & D. or construction—will express complete satisfaction with this budget. This is normal, and probably this is as it should be.

On the other hand, I am confident that they will agree that, within the total, there has been provided a sound balance among the three principal efforts with which we are concerned—operating and maintaining a strong, effective aerospace force today, procuring for a more modern aerospace force of tomorrow, and providing for the research and development effort which will shape the aerospace force of the future.

I believe, too, that you will find general agreement that this budget provides for a substantial increase in the total free world defense posture, when considered in conjunction with the significant contributions of our Army, Navy, and Marine Corps, and of our allies. The capabilities of all of these members of the defense team must be considered in assessing the adequacy of free-world defense capabilities, and I am confident that, in this context, this budget provides the Air Force the necessary funds with which to meet its responsibilities.

CHANGES IN THE AIR FORCE

If I were to choose one word to describe the tenor of the present period, and the period for which this budget provides, that word would be "change."

Change is evident in almost every area of Air Force activity and effort. Most evident and dramatic, perhaps, are the changing proportions of missiles and manned aircraft in our forces, with the missile proportion clearly in the ascendant. This shift in emphasis will continue for some time to come, with missiles—and eventually spacecraft—both complementing and replacing manned aircraft, wherever it is militarily advantageous and economically practicable to do so.

What the ultimate "mix" will be, no one can now predict with assured accuracy. However, we can say with certainty that we do not now foresee the time when missiles will have completely replaced manned aircraft in any of our mission areas, strategic, air defense, or tactical. Nevertheless, a constant increase in missile-equipped units is planned for our combat force structure, with the most rapid introduction of such units being in the strategic forces.

Change appears also in the size of our forces and the military strength which mans them. Technological progress in recent years has built into our advanced weapons and support systems great capabilities, which enables us to perform many tasks with fewer units and less personnel. Thus, from its peak of 414 combat squadrons at end fiscal year 1957, with nearly 920,000 military personnel, the Air Force will have been reduced, by the end of the budget year, to 316 combat squadrons and 825,000 military personnel. While technological advances have permitted these reductions, the reductions in turn have helped us to afford the vastly costlier, new hardware without great increases in the Defense budget. How long this compressive

reaction can continue is uncertain, but it is evident that its remaining potentialities should continue to be studied.

As is the case with military equipment, it is also true in the case of military manpower that decreases in quantity place greater premiums on quality. In this area, therefore, we also seek change, change in the character of the force, to make it more truly a career, professional body. As progress is made in those efforts directed toward making the Air Force a more attractive career field—particularly in such areas as more (and more adequate) family housing, community facilities; and realistic and equitable financial incentives—as these things are improved, so is our progress toward the optimum balance within our officer and enlisted personnel structures. Congressional support in the form of very beneficial personnel legislation has been particularly helpful in this regard in recent years.

Longer term objectives have been introduced which provide for a balanced and stable military force in terms of skills, grades, years of service distribution, and in the case of airmen a desired distribution of career versus first-term personnel. Existing controls have been revitalized and new controls instituted pertaining to procurement, promotion, training, reenlistment, and retirement. In arriving at the desired proportions of career and first-term personnel, particularly airmen, there are considered carefully both effectiveness and cost criteria, just as in our weapon system planning. This results in the most advantageous blend of quality people and hardware for the changing environment of the budget period and beyond.

Changes also occur in our operational concepts, and in the manner in which our forces are utilized, to exploit to the fullest their great potentials. For example, funds have been included in the budget to provide an "on the shelf" capability to conduct an airborne alert for some of our SAC aircraft, should the need arise. These funds provide the indoctrination training and maintenance needed to achieve that capability. Provision is not made to actually operate a continuous airborne alert. The actual operation would be financed as an excepted expense under section 3732, Revised Statutes, if necessary, as was provided for in section 612 of the 1960 Appropriation Act.

In spite of all the changes which have been and will continue to be made, however, I am reminded of the old French saying that "the more it changes, the more it is the same." The sameness, the constancy about the Air Force is the fact that it has been, it is now, and we intend that it remain, the most effective single military instrument with which to deter, and, if necessary, to overcome the primary military threat which faces us—aerospace power. And included in that capability, I might add, are powerful forces capable of coping with military aggression of varying scope and degree, short of a consummate conflict.

I should like now to highlight our fiscal year 1961 request in terms of the categories into which the military budget is divided and in so doing to touch upon some of the achievements of the past year and the status of certain major programs.

MILITARY PERSONNEL

In the military personnel category our budget includes $4,030 million in new appropriation (plus a transfer of $30 million from the

Air Force stock fund) for the active Air Force, $54 million for Reserve personnel, and $46 million for National Guard personnel.

The active force will number 823,451 man-years in 1961, a reduction of 6,586 from the average number estimated for the current fiscal year and 31,609 less than the actual average strength in fiscal 1959. End year strengths for both the current and the budget year are estimated at 825,000 as compared with 840,028 actually on board at end of fiscal year 1959.

The lower military strength derives directly from the reduction in forces, which will see 5 fewer combat wings and 3 fewer support squadrons at end of fiscal year 1961 than at end of fiscal year 1960, and 14 fewer combat wings and 26 fewer support squadrons than at end of fiscal year 1959, and from the decreases in training and support requirements associated with these reductions.

As I stated earlier, our emphasis in the military personnel area is on quality, and on those steps considered necessary to attain the quality level deemed essential to the Air Force.

Costs in this appropriation are a function of not only the numbers and man-years, but also the personnel turnover. Gains and losses increase due to procurement actions taken several years previous. This becomes particularly significant when, as is the case in fiscal year 1961, there is a coincidence of expiration of term of service dates for large blocks of personnel whose current enlistments began at different dates in the past. This fact plus the larger number of career eligibles, will make fiscal year 1961 one of the largest reenlistment years in Air Force history. Separations of airmen to reenlist or return to civilian life increase turnover costs—reenlistment bonuses, terminal leave payments and travel outlay.

While military strength is declining, the number of dependents is increasing, both new families and the size of the family units. More military personnel are qualifying for family allowances by virtue of their grades and service. Quarters allowances and travel are particularly involved.

Permanent change of station travel is vitally affected by the continuing changes in worldwide forces. The reduction in strength further intensifies individual and organized unit movments and costs. Increasing number of dependents moving with their military sponsors are provided for in this request.

These increased turnovers, dependents, and travel costs diminish the dollar recoupment which otherwise would have been realized by the strength reductions.

Our Reserve Personnel request will provide for training and instruction of Air Force Reserve personnel numbering 71,000 at end of fiscal year 1961. All of these reservists are in a paid status and are immediately available for recall to duty in case of emergency. This is an increase of 2,000 over the number at the end of 1960 and of over 6,000 as compared with end of fiscal year 1959. This request also provides for Air ROTC training to be conducted at 175 institutions during the budget year. From among the graduates of advanced ROTC training, we will order to active duty 3,690 young men, divided about equally between flying and nonflying officers.

The amount requested for National Guard Personnel provides for beginning and end strengths of 72,000 for fiscal year 1961, about 1,000

more than the actual strength at the end of fiscal year 1959. The stability of this important segment of the Air Force is reflected in the estimated average strength of 72,000 forecast for the budget year.

OPERATION AND MAINTENANCE

For "Operation and maintenance, Air Force," our request for fiscal year 1961 is $4,282 million, which includes requirements for the Air Force Reserve as well as the active force. We were able to restrict this appropriation request to that amount only because the reductions in force structure which the budget contemplates will help to offset the inescapable increases required to support other essential programs.

For example, during fiscal year 1961 increased numbers of B–52's, F–101's, F–105's, F–106's, and KC–135's will be assigned to our combat units. B–58's will also be entering the operational inventory. All of these are more expensive to operate, more expensive to maintain and repair, than the aircraft they replace.

An ever-increasing portion of the resources in this appropriation will be devoted to missile systems, and to the complex air detection, warning, and intelligence gathering systems, such as SAGE and BMEWS. Examples of other factors influencing requirements for operation and maintenance funds are the increased number of family quarters to be available, and provision for the costs associated with the Federal Employees' Health Benefit Act which becomes effective July 1, 1960.

For "Operation and maintenance, Air National Guard," the budget provides $176 million. This will provide for the operation and maintenance of the Air Guard's 24 wings of tactical type aircraft and a number of nontactical flying and ground support organizations.

The Air National Guard contributes to the Air Defense Command's capability by manning and operating the aircraft control and warning units at four locations, on an around-the-clock basis, and by maintaining 24 Guard fighter squadrons which have aircraft on a regular alert status.

PROCUREMENT REQUEST

For "Procurement," which is the largest single category, and includes about 40 percent of the new appropriations requested, our budget includes $2,994 million in Aircraft procurement, $3.024 million for missile procurement, and $1,057 million for Other procurement.

AIRCRAFT PROCUREMENT

The amount requested for Aircraft Procurement is the major source of financing for a planned program of procurement totaling $3,910 million, which will provide 633 aircraft. These include the additional B–52H heavy bombers required to complete the equipping of 14 wings; an additional quantity of B–58 supersonic medium bomber replacements for the B–47 bombers; additional KC–135 jet tankers for continued support of the bomber force; increased quantities of F–105 all-weather, supersonic tactical fighter-bombers; and more tactical transport aircraft, the C–130's.

Increased emphasis on missile capabilities is reflected both in the rather limited number of bombers to be procured, and in the fact that no provision is made in this budget for production of any interceptor aircraft. This program should not be regarded, however, as forever closing the door on further production of improved combat aircraft. Development work is to continue on the B–70 bomber airframe, and we may develop other essential elements of this weapon system. Also, a program for an improved, long-range, supersonic interceptor could well enter the picture in the not too distant future.

MISSILE PROCUREMENT

The amount requested for the "Missile procurement" appropriation in fiscal year 1961 is $3,024 million. Before discussing the general requirements for this appropriation, I would like to give you a brief résumé of accomplishments which have taken place during 1959 within the ballistic missile and other major missile programs.

Progress in our ballistic missile programs during 1959 has been gratifying to me. It was just 4 years ago that the decision was made to develop an intermediate range ballistic missile system. Today, in spite of reappraisals in the early years of the program, some minor technical difficulties and the obvious time-consuming delays of deploying to other nations, we have completed delivery of three complete squadrons of Thor missiles to the United Kingdom and expect completion of the last squadron by spring of this year.

The Royal Air Force has formally expressed complete confidence and satisfaction with the squadrons and have declared them operationally ready. Informally, they have also expressed deep admiration for the accomplishment of the Air Force and industrial team and a sincere appreciation for the reassurance and deterrent value provided by these weapons. In addition to deployment of equipment provided by the United States, the British provide all construction, rehabilitation, and repair of facilities for operational use, and all common support items such as vehicles, operating supplies, fuels, and base services.

All actions necessary to the deployment of three Jupiter missile squadrons to Italy and Turkey are progressing according to plan, and no impediments to meeting established dates in this regard are foreseen. These three squadrons will become operational within the next year or two.

In addition to the deployment of operational IRBM's, both the Jupiter, through its utilization by the Army Ballistic Missile Agency team under the direction of Dr. Werner Von Braun, and the Thor by the Air Force, have contributed greatly to the space programs of the United States. In all cases the operation of the Thor and Jupiter as basic boosters was excellent. Both the Thor and Jupiter have achieved a measure of reliability and accuracy which has exceeded our most optimistic goals. Of the test missiles fired for accuracy into our downrange splash net, all either equaled or exceeded the design goals for these missiles.

In addition, both missiles have made valuable contributions to the development of larger ballistic missiles through their use as first stages for testing of new materials for nose cones, at ICBM ranges and reentry speeds.

Progress with the ATLAS missile has also given me great satisfaction. After a series of problems and failures early in the year, the test program has returned to schedule and has achieved a substantial string of successful firings. During 1959, 22 ATLAS missiles were launched in the test and training program; 14 consecutive successful flights were achieved during the last half of the year. Five of these missiles using the radio inertial guidance system, which is used in early operational squadrons, were specifically aimed at the instrumented splash net and exceeded all expectations. They dramatically demonstrated the capability of this system to perform within the design requirement. One flight in September was the first training launch by the Air Force from Vandenberg Air Force Base. This complex missile has now taken its place along with bomber crews of the Strategic Air Command on a 24-hour continuous alert.

Operational ATLAS facilities are under construction at several sites in five States. Recent demonstrations of reliability and accuracy, together with the fact that training and construction programs are on schedule, promise the attainment of additional, fully operational squadrons in the year ahead. The ATLAS, pioneering in this completely new field of long-range ballistic missiles, has laid the foundation for other long-range ballistic missiles and for a much greater capability for the future in the national space programs.

The TITAN flight test program was launched early in 1959 with a spectacular series of four flights, all of which were highly successful and which concluded the testing of the A model missiles. Subsequent flight tests of the B and C models have resulted in two much-publicized failures. Thorough evaluation of these failures has convinced the Air Force that these accidents do not reflect deficiencies in the basic missile design, but were caused by malfunctions of automated and manual safety systems which are not contained in operational missiles.

It might be well at this time to state the basic reason which led to the establishment of the TITAN program. The TITAN program was originally instituted as an alternate to the ATLAS, in order to minimize the risk in achieving an effective deterrent missile force, to provide an expanded production base for the ICBM's, and to provide the maximum number of effective operational missiles during the 1960–64 time period. Subsequently, and as a result of the time differential in the initiation of the ATLAS and TITAN development programs, the TITAN has been able to capitalize on the developments of both the ATLAS and IRBM programs, resulting in a vehicle of more advanced design.

The time differential also permitted us to provide for completely hardened facilities for the TITAN force. This configuration, which is also planned to be utilized for the later ATLAS squadrons, greatly improves the survivability, and thus the deterrent value, of the ICBM force. Although we have had a temporary setback in the TITAN flight test program, our confidence in this system has not diminished. Difficulties are expected in the development of any new systems, with their attendant complexities, and in the TITAN we do not consider them any more formidable than those encountered earlier in the THOR and ATLAS programs.

During 1959 the Air Force received approval for a full scale, accelerated MINUTEMAN program. Four full scale missiles were

launched from test silos for short duration flights at Edwards Air Force Base. This was the first time that missiles of ICBM size had ever been fired directly from holes in the ground. These tests were highly successful and show promise of attaining the objectives established for this program on schedule. We expect that the MINUTEMAN, for the first time in recent history, will radically reverse the increasing cost trend of the modern weapon systems, both in terms of dollars and in terms of manpower. Of greater importance to the security of the Nation will be its highly automated capability for nearly instantaneous reaction, its producibility in large numbers, and its employments in hardened, dispersed and mobile configurations. The net results of these factors will significantly increase retaliatory effectiveness and deterrent value for every defense dollar spent.

I would like to again reiterate that in this tricky development business the spectacular failures of research and development missiles do not necessarily warrant the assumption that the missile system is deficient, that it will not work, that operational schedules cannot be met, or that rigorous actions should be taken to augment other programs because of these failures. These are things which we just have to live with and correct as we go along, having confidence that our skilled military and industrial teams can solve the problem and get on with the job, without unreasonable disruption of progress toward our objectives.

Within the "Missile procurement" appropriation of $3,024 million, ballistic missiles account for $2,131 million. We will move toward an increased and more effective ATLAS force, as well as an increased and technically superior TITAN force, with funds included in the fiscal year 1961 budget estimate. In addition, we will continue development of both hardened and dispersed and mobile MINUTEMAN missiles and equipment.

The BOMARC program is proceeding along the schedule discussed with you during the course of the fiscal year 1960 budget hearings. We now have two operational bases—McGuire and Suffolk—and progress toward other base operational dates is on schedule.

The test program is achieving successful results in its planned course. We have test fired 31 BOMARC's during 1959, 26 of which were BOMARC A's and 5 were BOMARC B's. Intercepts have been made on target drones at altitudes ranging from 7,000 to 43,000 feet, including supersonic drone missions.

The compatibility of the SAGE and BOMARC programs has been thoroughly demonstrated. Multiple mission capability, mixed mission capability, and target reassignment capability has been successfully accomplished, using SAGE control operations. Many of the BOMARC firings at Eglin Air Force Base have been under the control of the Montgomery SAGE sector.

In the tactical missile area, the MACE B system will be substantially completed in the fiscal year 1960 program. Funds in the fiscal year 1961 estimate provide for the remaining, short leadtime, ground support equipment for the force goal of four squadrons—two in Europe and two in the Pacific area.

Procurement of the HOUND DOG air-to-surface missile will continue at approximately the same level as in the current year, and the QUAIL decoy penetration aid will be substantially completed with

funds provided in this estimate. Both of these missiles increase the effectiveness of the B–52 heavy bomber.

OTHER PROCUREMENT

Within the "Other procurement" appropriation the largest single budget activity is ground communication-electronic equipment, which accounts for over 70 percent of the total program.

Within this program we will continue implementation of the ballistic missile early warning system (BMEWS) and other electronic systems associated with air defense, such as the semiautomatic ground environment (SAGE) and its extension into Canada, the radar improvement program, and both fixed and mobile automatic weapon control equipment for air defense in oversea areas. Improved ground navigational aids are provided, as are the continued extension and modernization of worldwide communications networks, and improved intelligence and cryptologic equipment.

The ballistic missile early warning system consists of widely dispersed radar installations, a central computer and display facilities in the Zone of Interior, and the necessary rearward communication links. I can report that we have been able to maintain our schedule for the Greenland and Alaska stations and the communications routes, despite some construction difficulties encountered last summer.

Construction is essentially complete in Greenland with all buildings accepted. Emplacement of electronic components is well along on the established schedule. No major implementation problems are anticipated in connection with this site.

At the Alaska site construction is now ahead of schedule and we anticipate no construction difficulties in connection with this site or its associated rearward communications, which would preclude meeting the scheduled initial operational capability date.

With respect to the third site, in the United Kingdom, all the groundwork has been laid and we are awaiting only the conclusion of a government-to-government agreement, before proceeding with actual construction. Negotiations to arrive at the necessary agreements are progressing very satisfactorily and we expect that they will be concluded at an early date.

In the SAGE system, the year 1959 has seen the completion of SAGE coverage of the northeastern portion of the United States and a substantial portion of the north-central section. During 1960 the system will become operational in the Northwest and the remaining portion of the Middle West, as several more direction centers and another combat center are added.

Other additions to our aircraft control and warning system include a substantial increase in gap filler radars in the current fiscal year with still more planned in fiscal year 1961, and additional prime radars and DEW line sites which are programed to become operational for the budget year.

Other items provided for in the "Other procurement" appropriation include vehicular equipment, weapons and ammunition, and many items of centrally procured equipment, materials, and supplies necessary to normal base operations and logistical support activities of the Air Force.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

The fiscal year 1961 budget request for the "Research, development, test, and evaluation" appropriation is $1,334 million, which represents a slight decrease from the comparable fiscal year 1960 program. However, within this program we will maintain approximately the same level of basic and applied research, for which $276 million is contained in the budget estimate, although basic research will increase. This will continue the exploratory effort toward solving problems of future years' weapons systems, and maintain implementation of these findings toward inventory use. Support of operational systems development will require $379 million, and the advanced development area will require $298 million.

Notable in fiscal year 1960 was the assignment to the Air Force of responsibility for the DISCOVERER, SAMOS, and MIDAS space programs and the transfer from the Advanced Research Project Agency of $275.3 million. Development costs for these systems will be continued in the fiscal year 1961 budget in the amount of $256 million.

In addition to the "Research, development, test, and evaluation" appropriation, there are contained in the "Procurement" appropriations fund requests for support of development, test, and evaluation in the amount of $1,095 million, which bring the estimated total research and development effort for fiscal year 1961 to $2,429 million.

Within this program we are continuing development of a nuclear propulsion system to provide a future nuclear-propelled aircraft weapon system. We will also continue development of an advanced air-to-surface missile of the ballistic type, to be launched from a bomber weapon system. The first phases of the Dyna Soar program leading to a manned suborbital space system will continue, as will many other component and subsystems developments which will provide the potential for new and advanced weapon systems of the future.

During fiscal year 1961 we will continue to perform advanced research and development work and space projects to the Advanced Research Projects Agency and the National Aeronautics and Space Administration. During fiscal year 1960, exclusive of those space systems transferred, we have received orders for work from ARPA in the amount of $50 million and from NASA in the amount of $43 million thus far. We anticipate that during fiscal year 1961 these will amount to $75 and $40 million, respectively.

MILITARY CONSTRUCTION, AIR FORCE

Our request for "Military Construction" for the active Air Force is $725 million for fiscal year 1961.

Over one-half of the total requested is for operational requirements of the strategic forces, and of this half over 75 percent is needed for construction related to intercontinental ballistic missiles. Additional ATLAS requirements and TITAN sites are provided for, as well as the initial deployment of MINUTEMAN.

Defense forces account for approximately 15 percent of the total requested, principally related to modernization of ground communications-electronics systems, such as SAGE, frequency diversity radars, gap-filler radars, and other A.C. & W. projects.

Limited provision is made for modernization of military installations, such as maintenance facilities, hospitals, troop housing, and some community facilities. As in other recent years, the urgent need to satisfy operational and operational support requirements precludes the financing of personnel facilities at a level which otherwise would be desirable.

MILITARY CONSTRUCTION, RESERVE FORCES

For the inactive components, the budget includes $7 million for "Military construction," Air National Guard, and $4 million for "Military construction, Air Force Reserve." New facility requirements for both components of the Reserve Forces have tapered off. The emphasis is now on urgently needed replacement construction.

CONCLUSION

In conclusion, I believe I can characterize this budget as one which provides for reasonable progress in the continuing transition from a manned aircraft force to a mixed manned and missile force; permits a reasonable degree of modernization of the manned aircraft portion of that force; affords an acceptable level of research and development toward the weapon and support systems of the future; and provides for maintenance, operation, and training of today's force in being at a minimum acceptable level.

If it please the committee, Mr. Chairman, may I suggest that General White make his statement now, and that we then respond to the committee's questions.

Mr. MAHON. Thank you for your helpful statement, Mr. Secretary. We will comply with your suggestion and hear General White at this time.

General, you may proceed.

GENERAL STATEMENT OF CHIEF OF STAFF OF THE AIR FORCE

BIOGRAPHICAL SKETCH

Born in Walker, Minn. on August 6, 1901. Graduated from U.S. Military Academy July 2, 1920. Graduated from Infantry School, Fort Benning, Ga., July 1921, and assigned duty with 14th Infantry at Fort Davis, Panama Canal Zone. Completed flight training September 1925, Kelly Field, Tex., and assigned duty with 99th Observation Squadron, Bolling Field, Washington, D.C. He served 4 years in China from June 1927 and then was reassigned to Headquarters Air Corps, Washington, D.C. He served as assistant military attaché for air to Russia, Italy, and Greece and as military attaché to Brazil and later chief of the U.S. military air mission to Brazil. In 1942, General White was appointed Assistant Chief of Staff for Operations of the 3d Air Force. In January 1944, he became Assistant Chief of Air Staff for Intelligence at Air Force Headquarters. General White later served as deputy commander of the 13th Air Force, taking part in the New Guinea, southern Philippines, and Borneo campaigns and later assumed command of the 7th Air Force in the Marianas. In October 1946, he was appointed Chief of Staff of the Pacific Air Command in Tokyo, Japan, and in October 1947 General White took command of the 5th Air Force in Japan. In October 1948, he became Director of Legislation and Liaison in the Office of the Secretary of the Air Force. He was assigned as Director of Plans, Headquarters, USAF, in February 1951 and in July 1951 assumed duties as Deputy Chief of Staff, Operations for the Air Force. General White was promoted to the rank of full general on June 30, 1953, and designated Vice Chief of Staff at that time. He became Chief of Staff, U.S. Air Force on July 1, 1957. His decorations include the Distinguished Service Medal, Legion

of Merit with one Oak Leaf Cluster, and Air Medal, with one Oak Leaf Cluster. His foreign decorations include the Southern Cross, Grade of Grand Officer, Brazil; Chevalier Order of Crown, Italy, and Commander Order of British Empire; Philippine Legion of Honor, Degree of Commander; Korean Order of Military Merit Taeguk with Gold Star; Order of Merit of Peru, in the rank of Grand Official; Military Medal, Chile; Order of the Merit of the Republic, Italy. He is a rated command pilot, combat observer, aircraft observer, and technical observer.

General WHITE. Mr. Chairman and members of the committee, it is a pleasure for me to appear before your committee once again. Secretary Sharp has covered the several appropriation requests contained in the Air Force budget estimates for fiscal year 1961. My prepared presentation will summarize briefly the current Air Force posture and the impact of the fiscal year 1961 budget upon its future capabilities.

Last year, when I appeared before your committee, I stated that our ability to deter war and to repel and decisively counter any possible attack in the 1960's must be based primarily upon the existence of aerospace power. Nothing has occurred since that time to change my conviction.

As we enter this critical era, it is apparent that ballistic missiles, piloted and unpiloted air breathing vehicles, spacecraft and satellites and, equally important, a strong national scientific and industrial technology—the basic ingredients of aerospace power—are indeed vital requirements for the future.

The power of the Communist bloc continues to be evidenced in the strength of its air, sea and land forces—all of which are backed up by a vital and active scientific and technological program. The Soviet aerospace threat, in particular, is increasingly pressing, diversified, sophisticated and ominous. The Soviet Air Force is the U.S.S.R.'s most dangerous weapon. Approximately 10 percent of its aircraft strength is in its long range air force of about 1,200 modern heavy and medium bombers. Included in this force are jet bombers comparable to our B–47's and B–52's. Complementing this strength is a rapidly growing intermediate and intercontinental range ballistic missile force.

The United States and its allies must possess combat capabilities which can deter or—if necessary—defeat this well-rounded and growing aerospace force. The U.S. Air Force has a very large part of this task. Our problem, then, is to continue to possess the kind of strength which will deter the Soviets from initiating either general or small war. To do this, we must plan for and develop the weapons we need in the years ahead and, at the same time, maintain our day-to-day capability at peak strength. We must continue to develop our forces along a broad spectrum—one which will provide effective and versatile advanced systems to meet the wide range of contingencies which may confront our nation. Furthermore, as we develop our forces for the future, we must bear in mind that the aerospace threat continues to grow rapidly—in quality, in quantity and in character.

CURRENT AIR FORCE CAPABILITIES

First, I will discuss the status of the Air Force today from the standpoint of its capacity to meet its part of the overall threat. I will start with our general war posture and then discuss our ability

to handle small wars and cold war contingencies. Finally, I will comment on airlift forces in the context of both general and small wars.

The great bulk of Air Force striking power is contained in the Strategic Air Command—a specified command reporting to the Joint Chiefs of Staff. As of today SAC is predominantly a manned bomber force, consisting of B–47's and B–52's supported by propeller driven KC–97 tankers and a growing jet tanker fleet of KC–135's. The B–52G—an improved model of the B–52—is being delivered to operational units. The supersonic B–58 has successfully completed the majority of its operational testing and will shortly enter the strategic combat inventory.

Previously approved programs for the dispersal of our bomber forces are well under way. Moreover, a significant portion of our planned ground alert system is in effect.

Intercontinental ballistic missiles now entering the operational inventory complement this bomber fleet. The Strategic Air Command has received its first ATLAS missiles and now possesses an operational capability with this weapon. ATLAS missiles are presently in the hands of SAC crews at Vandenberg Air Force Base, Calif. One of these crews has already made a successful training launch of an ATLAS from this base. At the present time, our ICBM force is small. However, the build up of this force is proceeding steadily. The results of our test and operational missile firings during the past 6 months have been excellent. The last 14 consecutive test launchings of operational type ATLAS missiles have been successful. We also have attained amazing accuracy with these missiles.

Next, I will discuss our current air defense status. Our air defense system, as you know, contains warning, control and ground environment systems—plus active air defense weapons. The warning system against aircraft and air breathing missiles is practically complete. You will recall that the distant early warning (DEW) line was completed in mid-1957. The western extension to this line, which continues from the Aleutians to Midway Island was completed during this past year. The eastern extension of the DEW line is under construction and will eventually join with the NATO system. Backing up the DEW line are the mid-Canada line and the Pine Tree line and various radars, Navy picket ships, airborne early warning and control aircraft and Texas Towers.

In addition to the warning net and our ground control intercept radars, the semiautomatic ground environment (SAGE) system is being integrated into the overall defense network. Thus far, 13 SAGE sites—two control centers and 11 SAGE direction centers—are in operation. These sites improve our current ability to meet the aircraft and air-breathing missile threat. Completion of the SAGE system will permit us to achieve even better correlation and identification of aircraft and air-breathing missiles—both our own and the enemy's—thereby reducing confusion, affording better protection to our own forces, and assuring maximum destruction of attacking forces.

Active area air defense of the United States is provided by fighter interceptors and the BOMARC surface-to-air missiles. These weapons, in conjunction with the Army's Nike point defenses, comprise the attack forces of our Nation's air defense. We have steadily progressed in integrating supersonic century series fighter interceptors

into our defense force. This year will see the last of the transonic interceptors—the F–86's and F–89's—in our continental air defense units. Our fighter interceptor forces will then be comprised of all-weather supersonic F–101's, F–102's and F–106's.

We now have BOMARC surface-to-air missiles operational at two sites—McGuire Air Force Base, N.J., and Suffolk County Air Force Base, N.Y. The BOMARC A has a range of approximately 200 miles. It has demonstrated its ability to destroy both subsonic and supersonic targets. It has also demonstrated its complete compatibility with the SAGE system through which it is launched and controlled. Later models of the same missile—the BOMARC B—will have a range of over 400 miles. The combination of fighter interceptors and long-range surface-to-air missiles provides a weapon mix which will be able to attack and destroy enemy attackers at long distances from their targets on this continent.

Air Force capabilities in situations short of general war are difficult to compartmentalize. All the functional commands within the Air Force share a close interrelationship. The spectrum of contingencies which we must be prepared to meet is wide and continuous—ranging from general war down to cold-war situations. Our ability to counter this wide gamut of threats must also reflect this diversity.

Our tactical air and airlift units are not the exclusive Air Force contributors to this Nation's small war capability. The role of the Strategic Air Command, which actually operates as a "steel umbrella" covering the employment of land, sea, and tactical air units, cannot be overlooked. Basically, however, our worldwide tactical air combat forces do contain particular abilities to meet these contingencies and to provide this country with versatile and effective small-war forces. These forces, in conjunction with the other services and the forces of our allies, contain substantial strength to deter or successfully counter limited aggression under most circumstances.

The Air Force's worldwide tactical air combat strength is comprised of tactical bomber, fighter, missile, and reconnaissance units. The majority of our overseas tactical strength is deployed to Europe and assigned for operational employment to the North Atlantic Treaty Organization. The majority of this strength is made up of tactical fighters—all of which are supersonic and capable of employing either nuclear or conventional weapons.

The Pacific Air Forces also have significant tactical combat capabilities.

Tactical missile units are, for the most part, equipped with air-breathing surface-to-surface MATADORS. As a point of interest, our oversea tactical missile units were the first combat forces to be equipped with a guided missile capability. The MATADOR has been operational and on station overseas since March 1954.

The MACE, a follow on tactical missile with increased operational range, greater accuracy, and improved penetration capabilities is now being delivered to our units overseas.

In addition to the capabilities of our tactical air forces overseas, we have a force specifically tailored for worldwide tactical operations—the Tactical Air Command's composite air strike force. This force is comprised of units specifically organized, and trained, and

equipped to meet small war contingencies. The equipment used by this specialized force is, in general, similar to that used by the oversea tactical units. The ability of this force to deploy quickly to oversea locations within a matter of hours has been made possible by the increased performance characteristics of our latest tactical fighters—and the fact that they now possess an air refueling capability. This feature has greatly increased the range of their operations—opening the door wide to new possibilities in the use of tactical airpower. The mobility of this force was demonstrated in both the Lebanon and Formosan crises. In each case, its units arrived quickly at the trouble spot—ready for immediate and effective action.

At the present time, the majority of our tactical fighter force is composed of F–100's—a swept-wing supersonic fighter. This aircraft and the newer F–105 which is now being phased into tactical units can operate as high performance nuclear and conventional weapon delivery vehicles in counter air, interdiction, and close air support operations. The F–105, in particular, has a better capacity for the close air support of ground troops than any previous tactical aircraft. Numerous features incorporated in the basic design and subsystems of this aircraft have been specifically pointed toward optimizing the close air support function. For example, almost any conceivable combination of ordnance or fuel can be arranged depending upon the type of target to be attacked and the distance from the base to the target. In addition, the stability and performance of the aircraft are admirably suited for the close air support role. Although the F–105 is a supersonic aircraft, its slow speed handling characteristics and ability to loiter at relatively low altitudes gives it good staying power for cover and support of ground operations.

Our total airlift capability is another extremely important factor in this country's ability to meet small war—as well as general war—contingencies. In this respect, our total airlift capability should be considered from the standpoint of the different sources involved.

First, of course, we have the Military Air Transport Service. This is a joint organization which possesses large cargo and troop carrier aircraft which constitute the backbone of our strategic airlift capability. Next, there are the medium troop carrier and assault-type aircraft assigned to the Tactical Air Command and our oversea tactical air forces. These aircraft support both inter- and intra-theater movement of our tactical air units and Army ground forces. The third category is the Civil Reserve Air Fleet—a force of civil aircraft designated for use by the military services in the event of emergency. Finally, there are the contract services provided by civil airlines for the peacetime movement of military personnel and small cargo items for all the services. This total capability is vital to our defense effort and must be kept modern as a strong backup to this Nation's total combat strength for either general or limited war. The contribution of the Military Air Transport Service to this total capability is comprised of aircraft and crews which are combat ready, worldwide air routes and bases, intricate control facilities, and finally a ready availability.

At the present time, we have 27 air transport squadrons within MATS, including 3 squadrons of Navy aircraft.

IMPACT OF FISCAL YEAR 1961 BUDGET UPON AIR FORCE CAPABILITIES

Now, I will discuss the impact of the fiscal year 1961 budget upon the capabilities of the Air Force. Approval of funds contained in this year's budget request will continue the buildup of our offensive strength. The procurement of additional B–58's will permit us to replace a portion of the B–47 force which is becoming obsolescent. The B–58 has a speed of more than 1,300 miles per hour and operates at altitudes of over 60,000 feet. The increased speed and altitude performance of this aircraft, plus excellent low-level flight characteristics, will increase the flexibility of our strategic offense. Continued procurement of KC–135 jet tankers will further increase the operational versatility of both our long-range bomber force and our composite air-strike force. Additional B–52's are also included. These will be the latest model B–52—the B–52H—which will be equipped with turbofan engines which will give us an overall increase in efficiency of approximately 15 percent over the turbojet engines. This increase in efficiency can be reflected in greater range, greater speed, higher load carrying capacity—or a combination of all three. Secretary Sharp already has mentioned the funds contained in the budget request to provide an "on the shelf" airborne alert capability. The growing Soviet ICBM threat—in conjunction with our present lack of reliable and timely missile warning, and the absence of an active missile defense—poses a potential risk which can only be met by this means. Funds included in the current budget, plus in stock items and follow-on 1961 procurement, will permit us to conduct an airborne alert operation for a portion of our strategic bomber force—should it be directed.

Funds also are included in the budget request to purchase additional HOUND DOG and QUAIL missiles. The QUAIL is a decoy missile. The HOUND DOG is a supersonic air-to-surface weapon with a nuclear warhead and a range of several hundred miles.

QUAIL and HOUND DOG missiles will enter SAC's operational inventory for use on B–52 aircraft during the year.

Funds are contained in this budget to continue development, test, and evaluation of the SKY BOLT air-launched ballistic missile. This missile, which will travel at many times the speed of sound, will have a range of approximately 1,000 miles. Tests of prototypes of this weapon have already proved that it can be launched from aircraft at both subsonic and supersonic speeds. Such weapons would give our bomber force an added punch and would, in fact, provide our country with the most mobile striking power ever achieved. Nuclear-propelled aircraft armed with such weapons would be able to conduct long endurance patrols over the seas, friendly land masses, and areas inaccessible by other means—with a capability to launch a devastating attack within minutes.

The buildup of our strategic missile force continues with funds requested in the budget under consideration for the procurement of ATLAS, TITAN, and MINUTEMAN missiles. As I mentioned earlier, results of test and operational firings of the ATLAS have been consistently good. On the other hand, we have encountered problems with the TITAN which have delayed our test program. I am certain that these problems will be solved just as they were over-

come with the ATLAS. As it stands now, successful development of the TITAN is the best route to permit us to achieve the desired ICBM force on schedule.

Development of the solid propellant MINUTEMAN missile continues on schedule. This missile should prove to be one of the most economical offensive weapons in recent history. In place, and ready to go, we expect the MINUTEMAN to cost far less than either the TITAN or the ATLAS. The MINUTEMAN force is planned for both hardened and mobile configurations. Our studies show that a portion of this force can be deployed on railroad cars which would move at random from place to place throughout the country's vast rail net. This will compound enemy targeting problems and further increase the survivability of our missile force.

In order to attain the earliest operational capabilities with our intercontinental ballistic missile force, the first sites are being constructed in soft and toughened configurations.

Funds also are contained in this budget to improve support of Army ground troops by augmenting our tactical air strength. Additional F–105 tactical fighters will be procured. These will be the latest model of the F–105—the D model—which is a true all-weather tactical fighter. Continued procurement of BULLPUP air-to-surface missiles for use by our tactical fighters is also included. These missiles are very effective weapons for interdiction, armed reconnaissance, and close support of ground operations.

Next—the air defense implications of the proposed budget request. No funds are included for the procurement of additional fighter interceptor aircraft. The F–106 will be the last of the fighter interceptors unless funds are subsequently programed to pursue the development of a more advanced interceptor type aircraft. Funds are included to continue the buildup of our BOMARC surface-to-air missile force.

Despite the programed increase of missiles and the reduction of fighter interceptor units, I still foresee a requirement for manned weapon systems—to see, to evaluate, to report—and if need be—to act. Furthermore, we must be able to counter the threat of missiles launched from enemy bomber aircraft. Long range interceptor aircraft are the most effective weapons for this purpose. They would be able to attack and destroy the bombers before they launched their missiles. Such missiles will soon be a part of our offensive punch. Similar missiles are known to be under development by the Soviet Union.

The budget request includes funds to continue with the SAGE system and our initial ballistic missile early warning sites. In the missile warning field, the Air Force also has the Midas early warning satellite under development. This is a satellite containing infrared detection devices which will sense ballistic missiles just after launch—while in the boost phase—and will broadcast an instantaneous alarm. Devices of this type will effectively complement the BMEWS and will give us longer warning time in which to launch our retaliatory forces.

To maintain as many effective combat forces as possible, substantial reductions were necessary in the combat support area. For example, we have drastically curtailed the Air Rescue Service and pro-

gramed the phasedown of aeromedical evacuation units. Although there is a military requirement for these activities, they cannot be supported at the expense of our combat forces.

Funds are also provided for the procurement of a limited number of C–130 turboprop transports; to complete the buy of T–37 jet primary trainers; and to purchase additional T–38 jet supersonic trainers and T–39 jet utility trainers.

Secretary Sharp has covered the funds included in the proposed budget for the support of a Ready Air Force Reserve and the Air National Guard. Today, the Air Force Reserve provides a troop carrier and cargo airlift capability for all the services; the Air National Guard provides a ready backup—and in some cases, an active backup—for our air defense and tactical air forces. Like the active Air Force, the Reserve components can be expected to undergo change in the years ahead. Our intent is to find new methods and missions which will maintain their efficiency and usefulness at a high level.

The level of funding for research, development, test and evaluation contained in the recommended budget is considered to be in reasonable balance with other appropriation requests. It will maintain our commitment in funding basic research programs, will fund the same level of support of the R.D.T. & E. installations and will continue to provide a reasonable applied research effort.

Funds for the development of a variety of unmanned space systems are included in the RDT&E appropriation request. The principal systems under development are the SAMOS and MIDAS satellites. I mentioned the MIDAS a moment ago. SAMOS is a reconnaissance satellite which is being developed to provide information on the actions of potential enemies. Continuation of the Discoverer series of satellites will also be funded. This series is being conducted to gain advanced engineering data and to develop biomedical recovery techniques. Continued development of the DYNASOAR—a suborbital boost glide vehicle with a global range capability—is also provided for. The DYNASOAR will be the first aerospace vehicle to combine the characteristic of missiles and aircraft into a single system. In the total appropriation request, funds also are included for the continued development, test and evaluation leading to two prototype B–70 airframes and to start modernization of the airlift fleet.

Secretary Sharp in his presentation pointed up the changing character of the Air Force—in types of equipment, in our combat systems and in the quantity and quality of people we need. In this respect, it is significant that despite our decreasing total personnel strength, our personnel costs have risen. This rising cost is the result of a variety of factors. First, and perhaps most obvious, we need a greater percentage of highly skilled people. This places great emphasis on retention beyond the first enlistment. We also have instituted a program to control carefully reenlistments and retirements. Our efforts to date have resulted in better retention of the skills we require. However, despite the increased retention rate, the turnover each year is substantial. Furthermore, better retention of career airmen has necessarily increased the average longevity, and—as a byproduct—has resulted in an older and more mature force with a greater number of dependents. These factors also add up to increased costs.

NONRATED OFFICERS

At this point I would like to depart from my prepared briefing and talk a little about one of the problems which the impact of technology is having on the Air Force. That is particularly in the personnel field where we are cutting down on the training rate for pilots and for navigators. This is having a very considerable problem in a number of directions.

I would like to mention chiefly the missile units where the nonrated officer under present policies has an even break with rated officers for command positions. I have taken a number of steps to insure this. I have changed the Air Force regulations from requiring that an Air Force unit must be commanded by a rated officer permitting nonrated command for many units. When we got the missile units the regulation read they would be commanded by any officer but preferably rated. "Preferably rated" has been eliminated from the regulations and any qualified officer may command a missile unit.

In addition to that, I am having a special board of officers in session to exhaustively study the matter of career opportunity for missile specialists and other nonrated officers.

In addition to that, I might point up that in several of our commands right now which have the major parts of the missile units and in SAC, which has the big missiles, the division commander himself can be a nonrated officer. There is not a nonrated commander at the moment, but the next one might well be.

The two first large missile units at Vandenberg and Fort Warren and Denver can be commanded by nonrated officers. We try to give great consideration to nonrated officers in all ranks of promotion, but very especially it shows up in the general officer grade. I do not pay much personal attention to whether officers are rated or not but I turned around just now to look at the group here, and there are two major generals present today nonrated, at least not wearing wings. They are among my most trusted staff advisers. There is a lieutenant general just retired, Comptroller of the Air Force, nonrated, and the new inspector general, who is coming in the first of next month, is nonrated.

What I am trying to tell the committee is that this is one of the problems facing the Air Force in this new age, and we are doing everything we can to straighten it out.

REDUCTION IN NUMBER OF OFFICERS ON FLYING STATUS

There is another aspect. This is the reduction in officers on flying status. As the number of cockpit spaces goes down, because of the increased missile units and fewer flying units, we must take officers off flying status. We are doing our best to keep the number of nonqualified officers or officers without future potential down to the minimum. We have just had a board, which is one of the toughest things I have ever come up with, in which we are taking off roughly 2,100 officers from flying status as of 2 or 3 months from now—to give them time to get adjusted to it. It is a very difficult thing to do. We had a board of general officers with a representative from every major command, and they worked for weeks with the records of all officers considered. They have finally come up with a recommendation to me that

2,100 officers be removed permanently from flying status. I simply point these things up as an example of the problems we are being faced with now in this changing age.

Mr. MAHON. Before you return to your text, I think it might be well to place in the record at this point the number of officers from which this reduction of 2,100 will be made. What was the number of the whole group?

General WHITE. Our total pilot personnel in the Air Force is 52,000, or thereabouts, and approximately 17,000 navigators and observers. As I recall, some 3,300 officers were reported as falling in those categories for a very special look as to their rated potential for the future—their status as pilots in the past—whether they kept up with their flying, whether they became qualified jet pilots—whether they did the best they could to keep up in the light of the duty assignments. This is a very serious matter. For instance, in the Research and Development Command there are many specialists, valued officers who are pilots or have been pilots, but whose primary duties do not really require flying. Many of them, for one reason or another, have not been able to get in their flying. All those things were taken into consideration by this board and in the screening process they had to have failed in at least two categories to be considered for removal from flying status,

Because it is so tough, I have told every major commander, personally, that if he certifies that there is something that has been overlooked and, if for the good of the service, this officer should be continued on flying status, I will personally look at it and expect to make reasonable exceptions. But it is a tough thing to do. I cannot just make it an arbitrary affair.

Mr. MAHON. Is this action sufficiently drastic that you are taking, you think, in the light of the changing complexion of the Air Force?

General WHITE. I think it is exceedingly drastic and it is very much tougher than any other service with flying personnel. I know that to be a fact.

FLIGHT PAY

Mr. MAHON. Will you state for the purpose of the record at this point what you mean by rated officers. I think we all understand but the record should show it.

General WHITE. I mean an officer who is qualified to fly, wears the insignia of a pilot or navigator.

Mr. MAHON. And draws——

General WHITE. And draws flight pay.

Mr. MAHON. Ranging from——

General WHITE. I think the maximum is in the case of the grade of colonel. It goes down. I think it is fixed across the board for general officers and from lieutenant colonel is a graduated scale. These scales are not uniform but are graduated by years of service as well as by rank.

Mr. MAHON. Will you give us a statement as to how much money is involved?

General WHITE. I can give numbers, distribution by grade. Perhaps you would like to have that in the record.

Mr. MAHON. You can do that, and also include the amount of money involved monthly to each rank.

General FRIEDMAN. We will include that. The colonel is the highest pay rate at $245 monthly, and we will graduate that down.

(The information follows:)

Fiscal year 1961 budget estimate incentive pay, crew members

	Man-years	Annual average rate	Monthly average rate	Fiscal year 1961 requirement
General	12	$1,980	$165.00	$24,000
Lieutenant general	25	1,980	165.00	50,000
Major general	136	1,980	165.00	269,000
Brigadier general	169	1,920	160.00	324,000
Colonel	3,215	2,936	244.67	9,440,000
Lieutenant colonel	5,479	2,929	244.08	16,048,000
Major	15,195	2,857	238.08	43,412,000
Captain	25,288	2,445	203.75	61,829,000
1st lieutenant	17,066	1,820	151.67	31,060,000
2d lieutenant	5,110	1,400	116.67	7,154,000
Total	71,695	2,366	197.17	169,610,000

Range of allowances, Public Law 20, 84th Congress

	Minimum		Maximum	
	Years of service	Monthly allowance	Years of service	Monthly allowance
General		$165		$165
Lieutenant general		165		165
Major general	Under 3	155	Over 3	165
Brigadier general	do	150	do	160
Colonel	do	200	Over 18	245
Lieutenant colonel	do	190	do	245
Major	do	170	do	240
Captain	do	145	Over 14	205
1st lieutenant	Under 2	115	do	185
2d lieutenant	do	100	do	170

Mr. FORD. Mr. Chairman.

Mr. MAHON. Mr. Ford.

Mr. FORD. This change from a rated status to nonrated status, does that mean that his career of necessity in the Air Force is harmed or impeded in the future?

General WHITE. It does not, sir, and that was contained specifically in the instructions that went to the commanders and in the letters to the officers themselves, stating that their potential, their future career in the Air Force is in nowise damaged by this act alone. Obviously, some of them have been, we will say, neglectful of what we think has been the primary duty of a flying officer, but if everything else is equal, with just his flying record short, he will not in any way be penalized.

Mr. MAHON. Proceed with your regular statement.

General WHITE. I have just one more paragraph.

CONCLUSION

This morning I have outlined current Air Force capabilities and provided a brief summary concerning the effect of the fiscal year 1961 budget request upon these capabilities. The need to maintain our combat strength on a day-to-day readiness—combined with the re-

quirement to prepare for the future—forced us to make some difficult decisions between the present and the future in formulating the budget we are discussing today. We have done our utmost to reach the best balance possible. This we have done with due regard to the substantial contributions made to the defense posture of the free world by the U.S. Army, the U.S. Navy, the Marine Corps and by our allies as well.

Thank you.

FUTURE OF THE AIR FORCE

Mr. MAHON. We thank you, General. I think it is obvious to all of us that each one of the services is, shall I say, fighting for a place in the sun, fighting for prestige and a place of continued importance in the defense picture of the United States. No officer, especially a young officer who has a career ahead of him, wants to see things happen that will diminish the importance of his career and downgrade his future. There are many in all the services who more or less have a vested interest in the continuation of certain programs and policies.

The changes in technological concepts in the last few years have, of course, been very remarkable. I would like for us to explore with you, General White and Mr. Secretary, the future of the Air Force more or less. We think of the Air Force as an organization composed principally of people who fly airplanes. I wish you would supply at this point in the record a list of the number of planes which were in your active inventory for, say, each of the last 10 years, a list of the number of pilots or rated officers who were in the service for those years, and for the last 10 years I wish you would give number of people in the pilot training program and the navigator training program by year.

(The information follows:)

Fiscal year	Aircraft (end of fiscal year)	Pilots crew, command, operations, and technical positions [1]	Pilot		Navigator and observer	
			Inventory	Production	Inventory	Production
1950	7,714	([2])	25,640	1,568	5,190	752
1951	11,067	([2])	43,256	2,033	11,636	1,187
1952	13,581	22,298	46,425	2,702	14,321	1,384
1953	15,432	22,266	48,469	4,595	14,104	3,160
1954	16,900	28,863	49,503	5,313	15,522	2,924
1955	18,296	31,089	53,007	5,787	18,654	4,359
1956	18,860	34,863	55,490	5,701	19,526	2,555
1957	18,156	36,681	57,643	5,333	20,179	2,625
1958	16,136	34,707	54,907	3,618	18,709	2,112
1959	15,276	33,133	54,024	2,325	18,063	1,507

[1] Pilots assigned to crew, command, operations, and technical positions which mandatorily require pilot incumbents. The above figures on pilots assigned to crew, command, operations, and technical positions which mandatorily require pilot incumbents do not include the number of pilots filling staff positions at all echelons where a rated background is necessary for accomplishment of the Air Force mission; nor do these statistics include those pilots required for Joint and Combined Staffs, air attachés, air missions, etc.

[2] Not available.

NUMBERS OF AIRCRAFT AND PERSONNEL DURING WORLD WAR II

Mr. MAHON. I wish also at this point you would give us some statistics with respect to the number of pilots, navigators, and planes utilized during World War II and generally what the comparable figures might be for that very high peak period.

(The information to be supplied follows:)

PILOTS, NAVIGATORS, BOMBARDIERS AND AIRCRAFT UTILIZED DURING WORLD WAR II

The peak aircraft inventory of the Air Force during World War II, attained in May 1945, was about 69,000, of which 41,000 represented combat types. As of the same time the pilot strength exceeded 155,000; bombardier strength, 28,000; navigator strength, 32,000. Peak training production rates were reached in 1944 for pilots (86,931) and navigator/bombardiers (35,918).

TRENDS IN MANPOWER, MANNED AIRCRAFT, AND MISSILES

Mr. MAHON. General White, for the last several years will you tell us just what the trend has been in a general way. We will have the statistics in the record now. What has been the general situation?

General WHITE. Ten years is rather a long period to have shown great impingement.

Mr. MAHON. We will not talk about 10 years. Talk about the time since Korea.

General WHITE. In the last 3 years we have cut down rather consistently for two reasons the manned aircraft units. I would say the first reason is that the cost of equipment has gone up; second, the number of personnel allowed to us has been cut. To accommodate these two factors and to provide the best force on the theory that we would rather have fewer really good units than more inefficient units, we have cut forces across the board.

We do, nevertheless, have a very large number of flying units today. The impingement has been from one major source, that is, the missile, the introduction of IRBM's and ICBM's, as well as air-breathing surface-to-surface missiles.

The new era which I foresee is greater utilization of the extension of the atmosphere into the next higher region, popularly known as space. I think that will have some impingement. I foresee that the trend will gradually change from a mix of manned aircraft and missiles to a mix of manned aircraft, missiles, and manned spacecraft some time in the future, over the long range.

The number of missile units now, is relatively small compared to the number of flying units. I foresee that for long into the future we will always have some flying units. I do not care how far you project this in the future. I believe the most obvious one is in airlift forces. Surely, as long as I can see, airlift will predominantly involve a manned aircraft force. In the tactical area, it is the same way—where your targets are chiefly targets of opportunity, where you must deal closely with ground forces. Also in interdiction, where you have unforeseen and suddenly discovered targets, there again it will take man, in my opinion, to search out and find that type of target. In the

bomber forces, I foresee a mix to include manned vehicles, particularly manned bombers, as I see it now, and missiles. There will be a point below which it would not, in my opinion, be advisable to reduce the manned bomber units.

In air defense, the impingement of missiles such as BOMARC has been drastic, as evidenced by the fact that we have been unable so far to program a new manned interceptor. We had the F–108, which was cut out of the program. It was considered too costly in the light of its relative importance. Without discussing the merits of the F–108, I am quite certain that the need for a manned interceptor still exists and likely will exist for a long time to come. For one thing, we must be able to police our own skies. We must be able to identify unknown tracks, of which there are a great many in the United States every day today due to improper flight clearances, due to weather—due to all sorts of circumstances. Often we are unable to correlate a fix picked up on the radar with any known flight plans. That is why we have a certain number of aircraft all over the country on 5-minute alert. They go up and take a look at these aircraft. The air defense theory is that these unknowns, on the day-to-day basis over the years, have set a pattern. We know about how many there should be due to this type of circumstance. If it appreciably increases, it is in itself a warning. We do not have any way other than with manned aircraft at this time to meet that requirement.

In addition to that, we must meet the threat of the air-to-surface missile with long range, such as our own HOUND DOG, which will initially have a range of some 500 miles—and we can anticipate an air-launched ballistic missile with a range of perhaps a thousand miles or more. This means that until we have some vastly more sophisticated surface-to-air missile system than we have or contemplate now, the only way to meet the air-to-surface missile threat is to have an airborne environment contained in the attacking aircraft itself. That is what the purpose of the F–108 was—to have a very high speed airframe with a very long range which can itself go out in several patterns. A typical pattern could be 8 or 10 of them apart at the radius distance of the self-contained radar. They could pick up anything in the skies out to the limit of their range, and they themselves would then be able to lock onto any target they picked up and knock out the incoming aircraft, which would contain air-launched missiles.

That, briefly, is it. There are many other reasons why I think the manned aircraft will always be a requirement for a long time to come.

Secretary SHARP. Could I add a word to that, Mr. Chairman?

Mr. MAHON. Yes, Mr. Secretary.

Secretary SHARP. I think it would be very dangerous to think of eliminating the manned bomber just because we have missiles. I think of a circumstance in which perhaps the enemy found a way to have intercepting missiles for these missiles, which is something we are working on very hard. If they should accomplish this and make our missiles impotent, and if we did not have something to fall back on that we knew how to use and knew it was effective, with the air-to-surface missile, we would be taking a terrible risk. For a long time to come we have to keep these bombers in readiness, if for no other reason.

Mr. MAHON. If an opponent is able to devise an airtight defense against the intercontinental missile, he should quite easily be able to devise a way to eliminate all our bombers, I would think.

Secretary SHARP. The problem is a little different, because the missile flies a predetermined path; and if the defense can find a way to interrupt it, either when it first starts or as it goes down its path, it is conceivable—although nobody knows how to do it very well yet—that a defense could knock it out and that the same defense might not be able to intercept a low-level high-speed bomber. The latter is a very difficult thing to do, because you do not know where it is going to come from.

AIRCRAFT INVENTORY REDUCTION

General FRIEDMAN. In aircraft inventory General Donnelly has some figures that show that end fiscal year 1957 was 22,115 aircraft: January 1, 1960, 16,778; end fiscal year 1961 we are programing 14,750.

Mr. MAHON. That is a drastic reduction, I would say, and would you not agree, in the inventory of aircraft?

General WHITE. There is more to it than just the statistical difference, if I might inject here, Mr. Chairman.

Mr. MAHON. All right.

General WHITE. I think it is a very good thing to have this in the record, to look at it, because I think we are going to pick up in the other areas.

No. 1 is the increasing effectiveness of the new aircraft. You take the B–50 versus the B–52. The effectiveness of the B–50 was nothing like that of the B–52. The F–94 or the F–80 against the F–106——

Mr. MAHON. The problem of the B–50 was not comparable to the problem of the B–52.

General WHITE. I think there is certainly great truth in that, too. It is hard to equate it.

Another point to bear in mind is that, to be real blunt about it, economy has forced us, forced me, to take very drastic action in eliminating some of the miscellaneous aircraft we have had. The World War II aircraft that were left over, the B–25's I cite as an example of that. We kept them in inventory for a long time since they were good pilot training aircraft. There were the old C–45's and many others such as the C–46's, that type of aircraft. We have cut them out of the inventory altogether in the last few years. I do not think this trend will necessarily go on at this rate.

Mr. MAHON. You can amplify that, if necessary, for the record.

General Friedman, will you recapitulate by giving us the decrease in aircraft inventory from the year which you chose to fiscal 1961?

General DONNELLY. 22,115 in 1957.

Mr. MAHON. What time in 1957?

General DONNELLY. That was the end of fiscal year 1957.

Mr. MAHON. You estimate on June 30, 1961, how many?

General DONNELLY. 14,750. That is a difference of 7,365 aircraft.

Mr. MAHON. Let us have the comparable figure for the number of pilots available, rated pilots, for that period.

General DONNELLY. We can give the pilot-navigator training rate, which would give you a fix for it.

Mr. MAHON. That would be interesting. We want that, too. You do not have the other?

General DONNELLY. We do not have the number of pilots.

Mr. MAHON. Give that for the record later. What about the training rate?

General DONNELLY. End of fiscal year 1957, 8,100. That is pilot and navigator. End of fiscal year 1961, 3,800. These are round numbers. There is a great drop there.

Mr. GARLOCK. Mr. Chairman, on those figures I would like to caution the committee on getting carried away on statistics. We made other changes which have had more effect than aircraft inventory change. There were the 2-year ROTC boys going through the pilot training pipeline so fast they hardly got into combat units. Mean time we switched to the 5-year requirement before they get into the full pilot training program, which substantially reduces the training requirement just by that change in length of time of service.

The training time is the same, the service in the unit is substantially greater. Factors like that have influence here, too.

General WHITE. A very great factor, too, has been the development and improvement of atomic weapons, which has made each type of aircraft much more lethal for its job. This is right in the period in which that has taken place.

Mr. MAHON. The gentleman from California had a question in regard to the reconciling of certain figures. You may ask the question.

Mr. LIPSCOMB. We have before us a book entitled "Budget Highlights," issued by the Office of the Secretary of Defense. On page 39 is a statement on the active aircraft inventory. The answer to Mr. Mahon's question does not appear to agree with the figures contained in this booklet on page 39. I would like to have those reconciled for the record.

General FRIEDMAN. We can do that, Mr. Lipscomb. These figures were supplied to the Department of Defense by the Department of the Air Force. I did check with General Donnelly, and the figures he gave before applied to the regular Air Force only.

Mr. LIPSCOMB. Did he use the same method of computation on June 30, 1957, as he did June 30, 1961?

General DONNELLY. Our figure was 22,115. I do not know if the method of computation was the same or not. I will have to find out and let you know, sir.

Mr. LIPSCOMB. In other words, you came to a conclusion that your reduction was over 7,000 aircraft; is that right?

General DONNELLY. Yes, sir; just by subtraction of these two.

Mr. LIPSCOMB. The record before the committee does not show that type of reduction.

General FRIEDMAN. Since these figures were provided by the Department of the Air Force to the Department of Defense, I am certain we can make a reconciliation between the figures which General Donnelly just gave and these in the book.

Mr. MAHON. At 2 o'clock will you reconcile those figures for us?

General FRIEDMAN. Yes, sir.

MAJOR OPERATING FACILITIES

Mr. MAHON. At 2 o'clock also please give us the answer as to the reduction in number of rated pilots. It would be good to place in the record at this time also the major operating facilities.

(The information to be supplied follows:)

Principal Regular Air Force installations

	Fiscal year 1959, actual	Fiscal year 1960, program	Fiscal year 1961, program
Operational	162	149	147
Operational flying support	13	17	14
Operational nonflying support	12	12	12
Foreign bases	8	7	13
Training	47	48	44
Research and test	7	7	7
Logistical	18	17	16
Total	267	257	253

DEFINITIONS

Operational.—An Air Force installation whose principal use is to provide support for Air Force combat and/or combat support, missile or flying units of squadron strength or greater, and which is assigned to a major operational command.

Operational flying support.—An Air Force installation whose principal use is to support flying activities other than combat or combat support flying forces (equivalent of squadron strength or greater), and which is assigned to a major operational command.

Operational nonflying support.—An Air Force installation without flying facilities whose principal use is to support headquarters of numbered air forces or higher echelons of a major operational command.

Foreign base.—An installation or location belonging to another government in which the Air Force does not have and is not programed to have a real property interest but where, in accordance with governmental agreements, the Air Force has certain operational and budgetary responsibilities.

Training.—An Air Force installation used principally to support a training mission.

Research and test.—An Air Force installation whose principal use is to support major research, development, or employment suitability testing missions and is assigned to the Air Research and Development Command.

Logistical.—An Air Force installation whose principal use is to support a major depot or the Air Materiel Command Headquarters.

Mr. MAHON. Getting back to the question of pilots, what is the situation with respect to the training of pilots and navigators, if your figures are so related, for fiscal 1961 and for the fiscal year ending June 30, 1957?

General FRIEDMAN. I will have to get those figures by 2 o'clock.

Mr. MAHON. All right. We will go into that matter at that time.

What is your pilot-training program for fiscal 1961?

General WEBSTER. For fiscal 1961 the pilot-training rate is 2,220 and in 1962 it drops to 1,500.

Mr. MAHON. What is the projection for 1963?

General WEBSTER. For 1963, we propose leveling at the 1,500 pilot-training rate per year.

Mr. MAHON. Do you think this level might continue for several years?

General WEBSTER. Yes, sir.

Mr. MAHON. You will, of course, provide us with the training level in fiscal 1957, but you do not have that figure now?

General WEBSTER. No, sir.

Mr. MAHON. You can give us that when we reconvene.

COLLEGE GRADUATES ENTERING AIR FORCE

It seems to me there was a time, General White, when college men, men of considerable formal educational background, sought to get into the Air Force or into the Navy and fly airplanes. What is happening to this trend?

General WHITE. One thing is, we have the Air Force Academy now. It is going to fill a large part of the bill. We feel we are going to get enough of the ROTC and college graduates—I would like to verify it—that we will be able to do away with the avaiation cadet training which heretofore has taken those people who do not meet the normal qualifications of college education, and so on. We think that at the reduced rate we foresee, based on current recruiting for that purpose, we will have all ROTC or other college graduates going in to fill the flying training requirements.

Mr. MAHON. Only a fraction would be Air Force Academy graduates?

General WHITE. Yes, sir. Nearly half, I should think, at the 1,500 rate.

Mr. MAHON. Of the pilots you are training now, what percentage are men who have college degrees or have 1, 2, 3, or 4 years in college?

General WHITE. We can furnish that. I do not have it.

(The information to be supplied follows:)

Data immediately available indicates that the student pilots who entered training in calendar year 1959 had the following characteristics:

	Percent
College graduates	49
2 years' college	24
High-school graduates	27

Mr. MAHON. I would like some enlightenment on the trend among young men today with respect to choosing a military career in aviation in view of the great missile program which has captured the imagination of the world.

General WHITE. We certainly are having no trouble in getting candidates for the Air Force Academy. It is my impression that the ROTC program is more than able to fill the training rate that we have and that we forsee to the extent that we expect to wash out the aviation cadet training. I would like to verify that this afternoon.

Mr. SIKES. Will the Chairman yield?

Mr. MAHON. Mr. Sikes.

Mr. SIKES. Do you not feel, General White, that the 5-year requirement for pilot trainees has cost you something in the type and in the number of available candidates? Five years is a big slice out of a young man's life in time of peace unless he expects to make a career in the Air Force. The 5-year requirement may deter many desirable young men from entering the Air Force.

General WHITE. I would agree with this sir. It probably has had some effect on the number of applicants, but those applicants we do get are much better motivated, much more the type that are going to

make a career of it. When you equate that to the cost of training, I think there is no question that the 5-year requirement is the correct one on balance.

Mr. GARLOCK. I have been very interested in this because it has a substantial impact on the cost of operation. I have talked with the field commanders, and the difference in length of time the pilot stays in, the operating unit tends to accumulate experienced pilots at a substantially higher ratio than when you put them through on a 2-year basis with 18 months' training and 6 months' duty.

Mr. SIKES. I do not quarrel with your decision. You do not need as many pilots now and with a 5-year requirement you can reduce pilot training costs and get a better trained product.

Mr. WHITTEN. Will the gentleman yield?

Mr. MAHON. Mr. Whitten.

AIR FORCE ACADEMY APPOINTMENTS

Mr. WHITTEN. In connection with the question of getting pilots, of course one man's experience is not conclusive, but my experience is the same as that of some of my colleagues. I have a lot of boys who would rather have an appointment at the Air Force Academy, would rather compete against nine others, than take an absolute appointment to West Point or Annapolis. I have had that experience quite frequently in the last few years.

General WHITE. I am very glad to hear that, sir. We think we have a great institution in the Air Force Academy.

Mr. ANDREWS. Mr. Chairman.

Mr. MAHON. Mr. Andrews.

Mr. ANDREWS. I was told yesterday by an Air Force officer that last year you had 7,700 applicants for admission into the Academy. You admit approximately 600.

General WHITE. It is more than 10 to 1, I know that, sir.

AIR FORCE ACADEMY OPERATING COSTS

Mr. ANDREWS. I was reading a report by one of our staff investigators which indicates, if I recall correctly, that the cost of educating a man at West Point was the highest, other than the costs at the Air Force Academy. Their figure was around $10,000 a year, and the Air Force was around $17,000.

Mr. MAHON. We had that issue before us last year. There was considerable press notice of this matter. The question was looked into and the figures were submitted. I do not have them at my fingertips. If anyone would supply them at this point, it would be helpful.

General WHITE. I can supply a general reason, Mr. Chairman, in that we had a full plant and did not have a full student body, so that the cost ratio was relatively high.

Mr. ANDREWS. You expect that cost to come down in line with the cost of the other Academies?

General WHITE. The Superintendent of the Air Force Academy told me the other day that within 2 years he will have the costs of the Air Force cadet below that of either of the other service academies. How he is going to do that, I do not know, because it is a much bigger

reservation, to start with. He is instituting many reforms and, of course, we will have the full complement there very shortly. All I will guarantee is that it will be in the same ball park. He says it will be less than the other academies.

Mr. MAHON. We have a study available to the committee at this time with respect to that problem.

Mr. NORRELL. Mr. Chairman.

Mr. MAHON. Mr. Norrell.

RELATIVE UNITED STATES-SOVIET CAPABILITIES

Mr. NORRELL. I think there is a general impression in our country, as well as elsewhere in the free world, that the Russian capabilities are greater than our capabilities. I do not believe that is true. I would like for you to say what you think, for the record.

General WHITE. I have no hesitancy in saying overall we have the greater capability. There may be a couple of fairly important areas for the future in which they are, in my opinion, to some degree ahead of us. I would put the space applications as No. 1, where I think there is no question but what they are ahead of us. The immediate military application of that is not quite apparent, but it is certain to me that it will have vast military implications in the future.

I also think we are taking many steps—when I say we, I mean the United States, not the Air Force, because we are charged with only a small segment of it—I am quite sure we are in position now to begin to go forward and to catch up.

The other area would be this. They certainly have more ICBM's or will have within a short time than we will; but there are many factors which, in my opinion, more than make up for that difference.

Mr. NORRELL. Thank you, Mr. Chairman and Mr. Secretary.

Mr. MAHON. We will adjourn until 2 o'clock.

FRIDAY, JANUARY 22, 1960.

AFTERNOON SESSION

Mr. MAHON. We will resume our hearings.

You were to provide us with certain information when we first met this afternoon, General Friedman.

General FREIDMAN. Yes. We have that information, Mr. Chairman. We can insert it in the record if you desire it, or we can give you the highlights and the figures.

Mr. MAHON. Give us the highlights and insert the tabulation in the record.

General FRIEDMAN. I will do that, sir.

REDUCTION IN NUMBERS OF AIRCRAFT

During the period from June 30, 1950, to June 30, 1961, the operating active inventory of the Air Force is as reflected on page 39 of the budget highlights to which Mr. Lipscomb referred this morning.

As regards the difference in figures which were provided this morning and their relation to these figures, I would like to take the position, June 30, 1957, and give the committee a reconciliation to these figures between that which General Donnelly and I gave, and the figures in the book.

For 1957, end position, we gave a figure of 22,115 aircraft. As I indicated this morning, it was my assumption that that figure did not include the Guard and Reserves, and that is correct.

To reconcile, then, to the 25,969 aircraft shown in the column "June 30, 1957," page 39 of the OSD budget highlights, we add the aircraft of the Air Force reserve, 824; Air National Guard, 2,170; earmarked for transfer to MAP, Army, Navy, and so forth, 830; this gives us the total of 25,969. In effect that is the reconciliation from the 22,115.

Mr. LIPSCOMB. Perhaps this ought to be off the record.

(Discussion off the record.)

ACTIVE AIRCRAFT INVENTORY REDUCTION

Mr. LIPSCOMB. I got the impression you were trying to show the reduction in the strength of the Air Force. This 7,000 figure does not, in my mind, adequately reflect the reduction in the aircraft, the figure is a little larger.

Mr. GARLOCK. I agree with the gentleman from California. I would like to have you give us the opportunity to select the figures that are most representative of the problem and go over them with you, or Mr. Lipscomb, and get in the record the figures that will give you the best comparison of the problem, 1957 and 1961.

(The information requested follows:)

Active aircraft inventory

	Actual, June 30, 1957	Estimated, June 30, 1961
Operating active:		
Regular Air Force	18,156	14,063
Air National Guard	2,009	2,275
Air Force Reserve	737	776
Subtotal	20,902	17,114
Nonoperating active: [1]		
Regular Air Force	3,989	945
Air National Guard	161	210
Air Force Reserve	87	77
Programed for transfer to military assistance program, Army, Navy, etc.	830	[2]
Subtotal	5,067	1,232
Total active aircraft	25,969	18,346

[1] Nonoperating active aircraft are in preparation or awaiting preparation for possession by operating units through any of the logistical processes of supply, maintenance, and/or modification.

[2] Aircraft programed for transfer to military assistance program are now carried in the inventory as inactive aircraft.

NUMBERS OF RATED PERSONNEL

Mr. MAHON. With respect to the number of pilots in the Air Force, the number of rated officers, do you have general figures from 1955 projected to 1962?

General WEBSTER. Yes.

Mr. MAHON. Generally, what are those?

General WEBSTER. I can give it to you in general terms. In 1955 the pilot inventory was at 53,000. It increased in the next 2 years. At this time we were building toward the 137-wing objective, and then it started declining in 1958. At end of 1960 we expect about 52,000, and this projection into 1961 is 51,700, approximately, and down to 49,000 by 1962.

Mr. MAHON. There is certainly no precipitous drop in rated personnel?

General WEBSTER. That is correct, sir.

In the navigator-observer category, a similar picture exists with a peaking in 1957 and a dropoff to an approximate 18,000 level in 1961, and holding at about that level.

I might point out, Mr. Chairman, that one of the reasons the rated inventory does tend to stay up a little bit more than the aircraft drop is that the ground alert requires higher crew ratios. If we go to airborne alert it will require higher ratios. This type of thing tends to keep requirements up.

With respect to training rates, we peaked our pilot training rate in 1955 at about 5,800. It has been reducing and in 1959 was 2,700, and also in 1960, and this morning I gave you the 1961 figure of 2,200, and the future projected drop to 1,500 in 1962 and beyond.

Mr. MAHON. Yes.

General WEBSTER. With respect to navigators and observers the same picture is generally true. Our figure in 1955 was 4,400, a high point. From that time, it declined steadily to 1,700 by 1959. We are holding the 1,700 navigator rate until the fiscal year 1963, when it drops to 1,500.

Mr. MAHON. It has been my feeling throughout that there should be considerably more unification among the services. I realize that is a controversial question and I do not care to discuss it at this time. If we had a greater degree of unification; if we moved more toward a single service, the problem of men having to look after their careers so jealously might not be quite the same as it is now.

FUTURE OF RETALIATORY FORCES

There are various long-range, probably crystal-ball-type, ideas abroad in the country with respect to the future of our retaliatory force. There are those who write and speak of having a retaliatory force almost completely waterborne. They argue this would eliminate making our cities and population areas major targets for an opponent. They say that the POLARIS is the first step in this area. They admit that the POLARIS system is very expensive, but they feel the likelihood of being able to obtain this capability after a surprise attack is greater with POLARIS than probably any other weapon upon the horizon today. They argue the next step should be placing our missiles on a mobile basis, on railroad tracks, or something of the like, and then they would look forward to the time when all or most of our retaliatory force would probably be at sea.

You are, of course, very familiar with that philosophy, General White. Does it have any validity for the long-range future? Is it being considered by your staff, and so forth?

General WHITE. We have thought a great deal about it, Mr. Chairman. We are very familiar with the philosophy you speak of. Before

I go into it I would like to point out that you raised the question, and in the context in which I think you are raising it, I would like to be very frank and at the same time not be accused of being interservice "rivalry" minded, or parochial.

Mr. FORD. The chairman is the Devil's advocate.

WATERBORNE STRATEGIC FORCES

General WHITE. I think there are some very important points that are overlooked under that theory. I would like to start, in the first place, by saying since the POLARIS is the thing we are really talking about at this stage of the game, I am in favor of the POLARIS weapon system. I think that it will contribute significantly to our overall retaliatory capability while I would equally stress it is not the whole answer by any means. It is one of several systems which promise to be effective and will complicate the enemy's defenses.

The POLARIS weapons system itself is certainly not invulnerable. The Soviets have a very much larger submarine fleet than we. I cannot conceive that a threat such as I think that can pose to the Soviet Union would exist long without some defense—some very effective defense being worked out.

One thing that occurs to me right away, of course, is that the submarines will be operating on the high seas. Well, there is nothing to prevent another submarine from staying right behind your submarine under international law. He can be right within firing distance all the time. With the number of submarines that the Soviets have—and presumably they will have more—I am sure that invulnerability is the wrong word. There is no question about the fact that it is a difficult target, but not invulnerable.

Now, to get into the philosophy of the thing, it would be a wonderful concept, relatively, if we could say that all we needed to do would be to put submarines out in the sea to fight another submarine threat and that the outcome of the war would be won by the one who won that particular battle. You could go on and carry that to the extreme and say that each country would pick its best gladiator and the two of them would fight it out and whoever won that battle would settle it for both nations.

Unfortunately, warfare is not based upon that type of thing. Modern warfare has as its objective—No. 1, the destruction of the enemy's capability to fight; and secondly, his will to fight. Obviously, you cannot settle it at sea that way because if you have all of your forces at sea there is nothing to prevent the enemy from taking out your cities, your industry, your will to fight, as well as your capability—except for that particular segment of it.

Mr. MAHON. We are speaking now of the retaliatory capability.

General WHITE. That is what I mean. That means they start it, and we retaliate.

Mr. MAHON. It is argued that come what may we must protect our retaliatory force, and if we have a sufficient retaliatory force, a force that is overwhelming in its capability, then our population centers will not be attacked.

General WHITE. Of course, there is an answer to that—namely, you cannot be sure that is so. If deterrence fails, where do you stand? You are absolutely wide open to the enemy.

Secretary SHARP. I wonder if I might comment on that.

Mr. LAIRD. I do not think your question has been answered by General White with regard to this whole question of mobility. He talked about the submarines, but as far as mobility is concerned, it is my understanding the Air Force feels there are certain merits to mobility.

General WHITE. Unquestionably—but there are many demerits to mobility. There is no mobile force that I can conceive of presently under consideration that will have as good accuracy. The very fact of the mobility reduces its accuracy. It reduces its warhead load as of now. It reduces its range. There are other degrading factors.

Secretary SHARP. I might make a comment on the general problem. I might say, to begin with, as General White has expressed it, he is in favor of the POLARIS weapons system, and I am, too. I think it adds problems to the enemy defense. But I was in antisubmarine warfare during the war. That is what I spent my military career at and I know something about it. It is very difficult to trail a submarine, or surface vessel, when you are moving yourself. The noises created by your own vessel moving make it very difficult. You have to then detect by what you call pinging, sound reflecting off the hull, which is restricted to a comparatively short range.

If you can station yourself stationary and listen, when you are perfectly quiet yourself, you can hear the propellers and the movement of the ships through the water at great distances, distances of many, many miles, depending upon the condition of the water. Therefore, in my opinion, a POLARIS submarine is not completely invulnerable to detection.

Mr. FLOOD. Have you been given the antisubmarine war briefing? This is the wrong war this man is citing. This is a waste of time. You are in the wrong war.

Secretary SHARP. I stand by what I said, you can detect at great distances if you are stationary.

Mr. FLOOD. Have you had a Navy antisubmarine warfare presentation this week?

Secretary SHARP. Yes, during this month.

Mr. FLOOD. And you still persist in this after what you know?

Secretary SHARP. Yes.

Mr. FLOOD. In the face of that, I withdraw anything I said.

Secretary SHARP. I am sorry, Mr. Flood. Therefore, it would not be too difficult with the enormous number of submarines the Soviet Union has over our number—and they can keep the lead if they want it—to trail our submarines if they think they are a sufficient threat. You could postulate the possibility of their having a predetermined time when they would attack the submarine. If this situation should exist, then our cities would be completely wide open to attack if we did not have any other way of deterring.

Mr. MAHON. We do not propose to defend our cities with strategic weapons, as I understand it. We have air defense weapons that we propose to use for their defense. As to deterrent, that is a difficult situation.

Secretary SHARP. If we have no other deterrence to the enemy than submarines, and if he could do what I just postulated, he could eliminate our deterrence and we would be completely at his mercy, so we need a mixed force of deterrents.

FUTURE CONCEPTS OF STRATEGIC FORCES

Mr. MAHON. We now need a mixed force. We are trying to project this considerably into the future.

Secretary SHARP. I am looking into the future also. If at any time we have only one system that he can find a method of eliminating, we would be taking the kind of risk that I do not think we should take. I think that we ought to have the POLARIS system. I think it is a fine system. It creates a real problem. There are solutions to the problem from the enemy's standpoint. I think if we had only one system and he solved it—and this is exactly along the lines that I mentioned this morning—if we had only missiles and no aircraft and if he could find a solution to the missiles, we would then be in great trouble.

I am a great believer in our having several methods of deterrence. I am not downgrading the POLARIS submarine because I think it is a wonderful weapon.

Mr. MAHON. I am not advocating anything at the moment. I am trying to ask some provocative questions in order to get your thinking here.

Would you agree that it might be desirable to have your strategic force, which would represent the major targets that the enemy might wish to attack, away from your population centers, and even away from your shoreline, if this could be done technologically?

Secretary SHARP. I would think certainly it might be desirable, if it were practicable, to have all the missiles we have on various forms in submarines, or in lands away from this country.

Mr. MAHON. I am not speaking of the intermediate range POLARIS submarine missile; I am speaking of all types of intercontinental missiles, and what not. I am just asking you about the long-range future of this sort of thing, Secretary Sharp. I think it would be practicable to support a large number of missiles spread around the world, away from the United States, if people would accept them in their territory instead of ours. To the extent that the enemy would have to attack those missiles, it would reduce the attack on our own country by that much. There seems to be an agreement among many people that the ICBM is going to be a very accurate weapon. I read in a report today by the Secretary of Defense that our ICBM's were, or would be, very accurate and that the opponent's ICBM's would be very accurate. If you have highly accurate ICBM's 5 or 10 years from now, and if you have immobile bases, fixed bases, and the location of those bases is well known to the opponent, it would seem that you would be in a pretty precarious situation.

EFFECTIVENESS OF MOBILE FORCES

Secretary SHARP. I am a great advocate of a mobilized system. I think that we should as quickly as possible move into the mobile MINUTEMAN on trains. It would be hard to find out where they would be the next hour. This would make it very difficult for the enemy to find them and hit them with their missiles, no matter how accurate. But if we are so successful in hiding all of our missiles, or making them impossible to hit with his missiles, and if he decides to

attack us, the only thing for him to do is to put all his missiles on our population centers because he has nothing else to shoot at.

Mr. MAHON. He would not shoot at our population centers if he thinks our realiatory force will remain intact and can destroy him in nothing flat.

Secretary SHARP. That is why I think we should have a mobile force and should also have POLARIS missiles.

General WHITE. There are two things, sir. If by building these submarine-carrying missile launchers we could make the enemy——

Mr. MAHON. We would not confine them to submarines.

General WHITE. Any mobile ones we will say are relatively invulnerable, then we are saying he would not build ICBM's because it is certainly true that an ICBM will not be effective against any mobile target. I do not think that follows. He obviously is going to continue to build ICBM's to take out our cities and to take out the ground-launched weapon systems. We will have to find other means, such as submarines and aircraft, to take out the mobile systems at sea.

Mr. MAHON. We propose an airborne alert, and we do a lot of hard thinking and planning because we think that if the enemy should strike, his first attempt will be to eliminate our retaliatory capability.

General WHITE. All right, sir. I would almost be able to turn that around and say that the only place you ought to have them is in the Zone of the Interior, because he will have that as his first objective because he knows where they are and he does not know where these others are. Therefore, he will fire on your missiles and not on your cities. You have to distinguish the fact that a missile is not useful against a mobile system.

Mr. MAHON. The point of those who argue for these mobile ICBM's and IRBM's is that the opponent would not dare hit your cities because he cannot accept the punishment which the unmolested mobile bases would deliver upon him; therefore, he will not hit you at all. That is their theory.

General WHITE. And it is a good one up to the point you can guarantee that you deter him. There is no guarantee of that because he obviously can and will find a defense against all of these things, and when he has that, you are completely flat.

Secretary SHARP. I agree with the argument that the mobile system is the best one because he has a harder time with a missile finding out how to hit it, and I think therefore we should have a mobile MINUTEMAN on trains that are moving around constantly so that he cannot keep track of where they are, and we should also have POLARIS submarines so that he cannot find out where they are. The airborne alert provides a system by which he has great difficulty in finding where the airplanes are, and no way to shoot them down unless he sends in interceptors.

General WHITE. I would agree with all that my Secretary says, with one stipulation—all other things being equal. The big fixed missiles have greater ranges and greater yield of warheads. There are some advantages to that, and there must be some of those. On the other hand, I do not disagree at all that a part of our force should be mobile just as fast as we can make it so.

ABUNDANCE OF RETALIATORY CAPABILITY

Mr. MAHON. The Chief of Naval Operations and the Chief of Staff of the Army told us last year, and I suspect they will repeat it this year if they are asked, that they felt we had probably a superabundance of retaliatory capability and that we ought to devote a lot of our energies to other fields; that you do not need an overkill capability beyond a certain point. They agree that you have to have some margin for safety, but it is argued by some of the people in the Army and the Navy that we have more than we require and a margin to spare in the retaliatory capability.

Last year I believe that you did not agree to that statement.

General WHITE. I agree even less this year.

Mr. MAHON. You would agree that if you have a few hundred ICBM's, and they are launched on target, you do not need just thousands and thousands of them to destroy the country generally?

General WHITE. Provided that you can get the missiles off; but we must remember that we expect to take the first blow in this war and we can only respond with what we have surviving. Even with the best of warning we are going to lose a very considerable part of our retaliatory forces wherever they be.

Mr. MAHON. But if you have ready, after you have been attacked and sustained your initial loss, a few hundred, you have enough to destroy generally, through a process of massive retaliation, most any enemy who would attack you. You might not be able to attack and destroy his missile bases, but would you agree generally otherwise?

General WHITE. I think it is precisely the Air Force's theory we must have enough forces to withstand his blow and still go back and knock him out. I do not for a minute agree that we have excessive forces to do that.

To assure the clarity of my comments concerning the Air Force's position on the subject of deterrence, I would like to insert a summary statement in the record.

Mr. MAHON. You may insert it at this point in the record, General White.

(The matter referred to follows:)

DETERRENCE

Deterrence of a strategic attack against us has become an increasingly discussed subject, and there is broad agreement on the need for effective deterrence. We hear today of all kinds of deterrence—mutual deterrence, finite deterrence, balanced deterrence, and stable deterrence. All of these terms reflect various theories, and they are a healthy sign of a deep national interest in the national problem of first importance.

Fundamentally, deterrence is what we hope to achieve through specific impact on the collective mind of the Soviet leadership. We achieve this impact as a result of their analysis of our total force posture, the capabilities they ascribe to that posture, and the options they think we have open to us. We must never lose sight of the fact that what we have in terms of military strength and what we can do with that strength is subject to cold, calculated analysis by the potential enemy. A significant change in military posture, a modification in essential capabilities does not and cannot remain a secret for long. Based on what they—the Soviet leadership—conclude about our manifest strength is the assessment which we hope will continue to result in deterrence.

I mentioned mutual deterrence. I take particular exception to this term because of its suggestion that we, the United States, are being deterred from a deliberate attack on the Soviet Union. I reject this—as I am sure you do. I

cannot agree that the Soviet Union is trying to deter us. Deterrence, as I see it, is a one-sided problem—it is ours.

From mutual deterrence it is one quick step to finite deterrence. This theory, based upon a limited or minimal strategic capability, seems first to disregard the possibility of reaction on our part to strategic warning, and this in itself is, in my judgment, so critical a deficiency as to invalidate the theory. This theory would have us base our defense on having enough forces surviving after an attack to destroy 100 or so enemy cities. The thought seems to be that this city destruction capability—without a specifically developed capability to destroy enemy aerospace forces—would be enough to deter the enemy. This is, I believe, an extremely dangerous approach to the problem. In the first place we are obligated to minimize the damage on the United States under any circumstances.

Consider also the impact of this concept on broad national policy objectives. Suppose that we concentrated on developing forces with a specific capability for city destruction instead of forces designed to destroy enemy nuclear delivery power. Then suppose the enemy decided to attack one of our allies to whom we have basic security obligations. Under these circumstances we would be forced to recognize that our decision to support the ally under attack could mean direct attack on our country by unimpaired Soviet striking power. I believe this situation would be apparent to the enemy and to our allies. It seems to me that "finite deterrence" equates pretty well with a "Fortress America" concept. I don't think that any such view of the problem is reasonable or acceptable.

This leads us into the next step along the line which involves so-called balanced or stable deterrence. I should make it clear at the outset that this question of achieving stability or of maintaining balance is a very tough one. We are dealing with two military systems which, as far as human knowledge today goes, represent close to the infinite in complication. Each system is composed of numerous critical elements. To suggest that we can count on achieving and maintaining a balance or a stability in all of the elements or even all of the key elements of this complicated structure is, in my judgment, not much more than unsupportable hopefulness. Tactics of offense and defense, scientific breakthrough, weapon development, passive defensive measures, all play upon one another in offering new ways to upset this balance, this stability. I find no comfort in any thought that the Soviets are not doing all that is within their power to assure this upset—in their favor.

I think that deterrence is too comprehensive a problem to be refined as far and as finitely as some would have us do. I would agree that all of this thinking, all of this discussion is helpful even if it only serves to highlight fallacies. What I would hope is that in the national interest we will recognize the nature of the job we have on our hands; that we will appreciate that there is no easy, quick fix and that we will give it the continuous attention, thought, and effort that its importance to our national survival warrants.

In summary, my opinion is that the true deterrent posture which we must have is composed of:

(*a*) Carefully designed military forces sufficient in both quantity and quality to destroy the enemy's warmaking capacity and will to fight.

(*b*) The national resolve and determination to maintain such military forces and to use them if necessary.

(*c*) Recognition by the potential enemy that this combination of strength and determination exist and are credible.

ANTI-ICBM MISSILE

Mr. MAHON. Do you believe that we will be able to perfect an anti-ICBM missile?

General WHITE. I am afraid it is a long time in the future. I think to perfect such a thing is one of the most important endeavors that we can be engaged in, and we are. I do not mean the Air Force, but the Army has its NIKE-ZEUS and ARPA has under study other systems.

While I believe that the NIKE-ZEUS is something we must continue our research and development on, I do not think it is ready for production because it does not seem to me that it is going to fill the

bill, particularly against sophisticated missiles. It has no discriminatory capability, and while I say that an antimissile defense is one of the most urgent problems we have, I do not think that we have anything in immediate sight.

Mr. MAHON. Do you think any country has an antibomber defense that would prevent aircraft from getting through to their targets with some considerable degree of success?

General WHITE. I think the Soviet Union has a good air defense, and I think we have a better one, but I do not think either one will prevent a substantial part of the air-breathing threat, the air-breathing missiles, and the manned bombers from getting through to their targets. All of history has taught us that. The defense and the offense generally stay in parallel with the offense ahead.

Mr. MAHON. Since we have been working on defense against the manned aircraft for a long time without any more success than you have indicated here, how could you expect, then, much success on the anti-ICBM missile?

General WHITE. I say it is a very, very difficult problem. On the other hand, there is one element of that which Secretary Sharp pointed out, that the ICBM follows a ballistic trajectory which is not susceptible to change, whereas an aircraft does not.

Mr. MAHON. Well, if it were possible to have point defense with the NIKE-ZEUS, and that may be one of its weaknesses, it would seem that in the long-range future it might be theoretically—and probably I am speaking in a very impractical way—worth while considering bunching our retaliatory force in some isolated areas, two or three areas in the country, and protecting those retaliatory forces with some sort of weapon that would insure their protection; then you would truly safeguard your retaliatory force. What do you think of that?

General WHITE. I could agree with that as a thesis, but I do not think it is the practical thing to do. Certainly a successful and efficient effective point defense against ICBM's would cause one to feel we should concentrate our retaliatory forces within the defense system.

Mr. MAHON. Do you have people who work on these long-range theoretical problems?

General WHITE. Yes. We do indeed, sir, both from the technical and tactical point of view.

Mr. MAHON. Has anyone come up with anything very meaningful in recent months?

General WHITE. There are some very excellent, extraordinary studies on the subject, all of them rather futuristic and all of them exceedingly expensive.

NATIONAL INTELLIGENCE ESTIMATES

Mr. MAHON. Now, I would like to talk to you a little bit about our intelligence reports.

We were all probably thrown off balance to some extent by the announcement that we were evaluating the opponent on the basis of what he will do instead of on the basis of what he can do.

Has the Air Force participated, Mr. Secretary or General White, in this new method of estimation?

Secretary SHARP. We have been exposed to it. We did not participate in evolving it. This is a Central Intelligence problem. Central Intelligence is the one that evolved this plan.

Mr. LAIRD. The whole intelligence community evolved our estimates.

General WHITE. It should be pointed out this is an executive branch organization—that there is a national intelligence community which is composed of the Central Intelligence, the FBI, the State Department, and the service intelligence chiefs. Through our intelligence chiefs we have participated in the latest national intelligence estimates. I feel that since this is an executive branch organization—since it is a complex and esoteric subject in which we have not personally been involved—it is one that would be inappropriate, if I may say so, Mr. Secretary, for either you or me to go into in any great length today.

Mr. FLOOD. Esoteric problems is the best description. That is just what it is. That is it. You do not want to clarify "esoteric"?

General WHITE. No, sir.

Mr. LAIRD. Is it not also true that Central Intelligence gave us the estimates by intelligence community? Do you have the intelligence estimate of the Air Force? The Air Force took an exception to the community position on a very few points.

Mr. MAHON. Yes; but I think we principally here want to talk about the on-the-record testimony of the Secretary of Defense, because he did discuss this issue with us in his testimony.

Mr. LAIRD. But he was careful, I think, to indicate each time the Air Force position as far as missiles were concerned. He gave us the Air Force position and he also gave us the intelligence community position, when there was any difference.

AIR FORCE INTERPRETATION OF INTELLIGENCE TECHNIQUE

Mr. MAHON. I am not concerned about interrogating you in regard to how this technique was devised or why it was devised. That is not a question primarily for you. But, I wish to interrogate you as to the validity of this procedure.

You, as heads of the Air Force, are charged with a very grave responsibility—both of you—and do you think the best procedure for you to proceed on, or operate under, is that of estimating what the opponent is doing or what the opponent is capable of doing?

Heretofore we have talked about what the opponent was capable of doing, and Air Force officers have given us their estimates on that.

General WHITE. Mr. Chairman, my very limited knowledge of this particular, shall we say, controversy, leads me to believe that this is not quite so black and white a subject as it is being made to me, and I really think you can only get to the bottom of this through the intelligence people.

I would say it is fair to make two observations, and I think I can without getting out of my field.

Mr. MAHON. Yes.

General WHITE. One is that certainly a commander in the field must make his plans based upon enemy capability, and not on enemy intentions. On the other hand, at the seat of the government where there

is a very vast intelligence input, I can conceive a situation where intentions could to a degree have an influence, and I will cite just one example that occurs to me. It is purely hypothetical, and the only reason I cite it is to indicate that this can be a gray area.

For instance, suppose it were known—and I will take an aircraft factory that has so many thousand square feet of floor space to produce aircraft—suppose we knew that if there were three shifts per day operating, it could produce so many aircraft per day, but we also knew that they were working only one shift per day. I think it would be fair to say as of this particular observation that their intention was only to produce the number of aircraft per day that one shift per day could do. I would not want to go further because I am not skilled enough or up to date enough, and I cite that as an example of where this could be applied at a high level and not in the field.

Mr. MAHON. In planning to have the Air Force fulfill its responsibility in the event of an emergency, you have to give consideration to the problem of what your opponent can do and will do.

Would it be fair to say that you would be interested both in what he is capable of doing, and also what he is doing, if you can get that information?

General WHITE. I think that is very true, sir.

Mr. MAHON. Would you not want to consider his capability and also, if you can find out, what he is doing? It seems to me that you would want to weigh both of these factors.

General WHITE. I think, again, without being entirely up to date on it, that that is about what has occurred, but as I say, I cannot get into it because I really do not know.

Mr. OSTERTAG. Is not that the basis for Intelligence construction? Intelligence, as I understand it, is not known facts entirely but rather estimates of what the capabilities are and deductions as between one thing and another.

Mr. MAHON. Well, I believe Intelligence is made up of facts, plus estimates and calculations.

Mr. FORD. Would the gentleman yield to me?

Mr. MAHON. Yes.

Mr. FORD. It is my recollection, from what was testified before the committee by Mr. Dulles and by General Twining, that there was not any significant difference between the figures they presented as to intention and as to capability in the missile field.

Mr. MAHON. I do not agree with that.

Mr. LAIRD. Well, Mr. Chairman——

Mr. MAHON. I do not agree with that.

Mr. LAIRD. It was their other estimate as far as the ICBM is concerned where the exception was taken by the Air Force, I think.

The problem is that if you read the secret record over, and if somebody reads the public record over without having been in here and considering the information that was deleted from that particular record, it would give the person reading the record the idea that we are discounting what they could do. I think that is how this thing got off to a bad start, the deletions made for the public record confused the whole picture. The Intelligence community has never made its estimates purely on basis of what could be done. If you did that, taking the area of Russian bombers, we would have bombers coming out of our ears.

Mr. MAHON. They once did have them in the estimates.

Mr. LAIRD. They once overestimated; that is true, but in this estimate I do not think they overestimated bombers.

The Air Force took no exception to the position of the Intelligence community on bombers. They took an exception as far as the ICBM's are concerned, and they take that exception in 1963—the Intelligence people in the Air Force.

Mr. MAHON. But they take an exception on the bombers, too. Can you speak on that, General?

General WHITE. I am not familiar with the exception on bombers.

Mr. MAHON. Are you familiar with it, Mr. Secretary?

General WHITE. I know there is at a later date.

Mr. LAIRD. At a later date; yes. My only point—and I do not mean to interrupt, Mr. Chairman—is that I reread the public record last night, and I think by releasing the hearing in this form, that is in with the deletions, all of the people have been misled about what this estimate is. There is no greater difference in the estimate this year than there was in the estimate last year, as far as numbers are concerned.

Mr. FLOOD. Mr. Chairman, that is the fallacy of the whole premise. This is a fallacy of the major premise. It is the fact that there is no diversity in the figures which makes the whole concept ridiculous. It is the fact that there is no diversion in the figures. If that were true, there would be reason for the latter, but the fact that the ratio is still 3 to 1 is what makes the whole concept fantastic. There is no change in the figures. It is the philosophy of using them that is the evil and the danger.

Mr. LAIRD. Their figures have changed.

Mr. FLOOD. So much the worse, but you understand the fallacy here.

Mr. MAHON. If you agree that you do not know what the opponent actually is doing, then it seems to me to be an ostrich-in-the-sand philosophy of the worst type not to cling pretty closely to what the opponent is capable of doing. I hope I make my point.

Secretary SHARP. We certainly do consider that point. There is no doubt about it. We consider it along with the evidence that might be available as to apparently what he is doing.

Mr. MAHON. Surely. You need both types of evidence.

Secretary SHARP. You cannot be sure that either one is right, and you have to consider one with the other.

Mr. MAHON. Or, if you are going to err at all, err on the side of safety.

Secretary SHARP. I think that is correct, and I consider, from my point of view, that we have to have an adequate overall deterrent to be in a sound position even if we take the blackest picture. If we do not take the blackest picture, we are then in a more advantageous position than we had thought we would be.

DETERRENCE OF RATIONAL OPPONENT

Mr. MAHON. We have been told that even in the period of the so-called ICBM gap that our retaliatory force is strong enough to deter any rational decision to attack.

Putting it another way—I have in mind certain quotes on page 4 of the first volume of our hearings—I understand our philosophy to be,

and our judgment to be, that even throughout the early 1960's our strength is sufficiently great that no rational opponent would undertake to attack us.

Is that a good philosophy or basis of estimation?

Secretary SHARP. I would say that it is; yes, sir.

Mr. MAHON. May I proceed just one more step here?

It was irrational, I would say, for the Japanese to have attacked us at Pearl Harbor, and attacks in the past which have provoked wars have often been irrational.

So, where does that leave you if you are only dealing with rational people? I am a little disturbed by that.

Secretary SHARP. Well, I think we are in trouble if the enemy has sufficient power to wipe us off the face of the earth, which I do not think he has now. If he adds to that power and becomes completely irrational and is willing to take the blow that he would get in response to his blow, and have his country destroyed in order to strike another—if he were that irrational, I think we would be probably in a rather dangerous position, if we always wait for the first blow.

I think this puts us in a very disturbing position, as I say, if we continue to wait for the first blow, under circumstances where we think he may be irrational, I think this disurbing, but, I do not think in the past these strikes have been obviously irrational. People thought they could win. Under the conditions we have today, it would appear that anyone who was going to strike us would also surely know he was going to be destroyed. If he wanted to make that kind of exchange, it would be the type of irrationality that would almost approach insanity.

In the earlier case of Japan attacking Pearl Harbor, they thought they could deal us a blow that we could not recover from in time, I am sure, or they would not have tried it.

Mr. MAHON. But it seems to me it was entirely irrational for them to think they could defeat us in a war. So, it seems to me that anyone who starts a war now would be in a measure guilty of lunacy in the first degree. We cannot always depend upon the opponent being a rational, clearheaded, honest type.

Secretary SHARP. I think if it is very clear to the enemy that he is going to be completely destroyed and that he could not surprise us to the extent that he can wipe out our ability to attack him after he hits us. As long as it is very clear that he is going to receive this deathblow if he tries anything, I believe then he will be more rational than he would be if there were doubts in his mind. Undoubtedly, in the case of Pearl Harbor, the Japanese thought they could accomplish their end, by taking enough land in Asia and holding on to it, and that we would make the effort that we did make to drive them out of the empire that they were taking over. But, if the enemy is absolutely sure that we are going to destroy him immediately, I think he would have to be an insane person to even think of attacking us.

DETERRENCE OF IRRATIONAL OPPONENT

Mr. MAHON. General White, do you have any comment on that question which I raised?

General WHITE. I do not have any trouble about the rational, but the irrational decision to wage atomic war certainly means serious dam-

age to both sides. I do not know that there is an answer to that, because I do not think that under any circumstances that we would be able to prevent receiving serious damage in an atomic war, no matter what we have, and nothing is going to prevent them getting it. So, in that sort of a situation both sides are going to suffer disaster.

Mr. MAHON. Would it be worth while to try to have a defense program that would be adequate to cope with an irrational opponent? Would that be futile?

General WHITE. I think we should strive to have good insurance against either a rational or an irrational decision. As to the latter, it is very difficult to say, because we certainly could put everything in the Nation in the defense business and we still could not be sure in my opinion.

ECONOMIC IMPACT OF DEFENSE SPENDING

Mr. WHITTEN. Mr. Chairman, if you will yield—and I am not being facetious in raising this point—in view of this line of questions and answers which go to what we know and what we suspect and what we conjecture, and how far we are basing our own plans on those various things that we might have to do to prevent Russia from striking at us, I feel I should raise the side that frequently we forget in this kind of discussion, and that is the economic side.

The hearing discloses that our present military spending is, in my opinion, resulting in 7 percent inflation per year. That means that at the present rate our economy might reach the stage at which our money will buy practically nothing in 20 or 25 years.

The record shows that the responsible naval budget officers throughout the Navy estimated for the Navy Department and—I presume it applies pretty much to the others—requested of the Naval Secretary an increase of 60 percent in appropriation funds for the present year over the past year. That was scaled down by the President's Bureau of the Budget.

Carrying that on out, it would mean if Congress agreed with any such recommendation by the Navy, why, we would be bankrupt and our money would mean nothing in just a very few years.

If Congress were to do that, or if Russia can say that we are using the "possibilities" and the "could be's" leading to a breakdown of our economy, if we were to increase the budget request before us, so as to further continue that 7-percent inflation, do you not think that Russia might not hit us a lick, based on the fact that she could see that all she has got to do is sit back and let us do it to ourselves?

General WHITE. That is more in your political field, Mr. Secretary.

Mr. WHITTEN. I do not think that is a political field, if I may say so. Here we are at the present level of spending, having a 7-percent inflation per year. It is just a matter of logarithms to figure out how long it would take for the 7-percent inflation to bring us to the point where our money is worth nothing. We have seen what it has done in France and elsewhere.

I also see as I read these hearings, that the Navy Department—which is typical of others—within itself has asked or at least said they could use a 60-percent increase in funds for the Navy above what they have this year. The Secretary of the Navy and of Defense and the President did not let them have it in the budget.

If we should buy that estimate of the Navy, which I think is completely unrealistic, and if Russia can see that we are doing that to ourselves, do you not think they would say "Why risk hitting them in a military way? Just sit tight."

So, do you not think that course is something of a deterrent toward actually a military strike against us?

Mr. FORD. Will the gentleman yield?

Mr. WHITTEN. I would like to have an answer, first, if I might.

EFFECT OF OUR POLICY OF NONAGGRESSION

Secretary SHARP. I might say they certainly have an advantage over us in the fact that they make the first move, and we have to guess what they are doing, and then have to counter——

Mr. WHITTEN. Who made that decision?

Secretary SHARP. Our Commander in Chief makes that decision—that we will not strike the first blow.

Mr. WHITTEN. I am not advocating it, but I have seriously questioned it, and I do not question at all that we should not hit the first lick, perhaps, but I have always had a serious question as to whether we should advertise the fact that we will not, because in the advertising you lead us into spending 10 times more so as to surrender one-half or three-fourths of what we have and still have enough left.

I sometimes wonder if that decision to announce to the world that we will not hit the first lick might not have justified a whole lot of continued spending that, perhaps, we would not have had to do if we had just withheld this announcement to the world.

Secretary SHARP. There is no doubt that this policy puts us at a disadvantage and it makes it more difficult for us to solve the problem of national defense when we do announce it. On the other hand it may have certain advantages because the fact that we do not say it might be inflammatory and, in fact, it might induce him to take a chance, because he is frightened.

Mr. WHITTEN. I do think this thought, or this side of the matter, should appear in connection with the hearings.

Mr. FORD. I think it is accurate to say that the Department of the Navy did not ask for $19 billion for fiscal 1961. That figure was brought together at the request of the Secretary of the Navy for planning purposes. He later scaled it down to a figure of around $12.5 billion or thereabouts.

Mr. FLOOD. It was a "guesstimate" figure just as the other services had a guesstimate.

Mr. WHITTEN. It did not go from the Navy or any other place.

Mr. MAHON. It did not go to the Secretary of Defense.

OBJECTIVES CONTROLLING RATIONALIZATIONS

Mr. SIKES. We are talking about what is rational and what is not rational. At the time it occurred few authorities would have said what the Japanese did at Pearl Harbor was irrational. They had the objective of becoming the dominant power in the Far East, and the only foreseeable force in their way was at Pearl Harbor, represented by our fleet.

The other world powers were tied up with their conflict in Europe, and could not do very much to impede the Japanese. The United States was not prepared to fight a war. We were just starting to prepare for the eventuality of conflict. The Japanese could readily see this was their big opportunity to knock out our fleet, after which there would be little deterrent to their plans. They did not reckon with the determination of the United States, and so what appeared to be quite rational at the time, proved later to be highly irrational. That makes me wonder a little about our rationalizations now.

We have it all figured out that Russia is going to be rational, and not attack us because we are too strong. Russia may not see the situation as we do. They see that in a couple of years we are going to be in the position to inflict a great deal more damage on Russian bases and on Russia's capacity to wage war than we can inflict now. At the moment we have a fairly sizable capacity to inflict damage, and we hope it is enough to deter Russia, but if they think war is inevitable, they might well decide that this year or next year would be a rational time to attack.

I do not think we should get into the mistake of rationalizing on what the other fellow is going to do and allowing ourselves to be influenced too greatly as a result.

Mr. FLOOD. The error of rationalizing at Pearl Harbor was not as you have stated it so far. It was the failure of the American commander to rationalize the facts. The Japanese fleet was at sea. That is the absolute fact. Our commander decided it was going to attack southeast Asia, and not Hawaii. That is the error of rationale.

Mr. MAHON. Yes.

Mr. FLOOD. You see how silly you can get.

Mr. MAHON. Instead of assuming they might be attacked, because they could be attacked, and they failed to reckon with it properly.

Mr. FLOOD. Hawaii, vis-a-vis southeast Asia, they made a mistake. You cannot run this ball game that way at this level.

Mr. MAHON. Mr. Andrews, did you have a question?

U.S. RETALIATORY CAPABILITY

Mr. ANDREWS. General, can you conceive of Russia acquiring a capability that would permit them to knock us out in the first blow, paralyzing our retaliatory capability before we could make use of it?

General WHITE. I cannot conceive of it, because I do not think this country will permit any such situation to arise.

Mr. ANDREWS. That could not be done today?

General WHITE. If we fail to project the forces we need in the future, yes; but I cannot conceive of that.

Mr. ANDREWS. But as of today the possibility could not arise?

General WHITE. As of today; no.

Mr. ANDREWS. In other words, there is no possible way that they could strike us and keep our forces from retaliating and doing them untold damage?

General WHITE. As of today, nor as of the period covered by this budget, provided we have the ability to go on an airborne alert as it appears in the budget, and I cannot believe that that could happen.

Mr. ANDREWS. So long as we retain that retaliatory capability, do you believe that we will have an atomic war with Russia—all out war?

General WHITE. I am sure that if we do not keep up our forces that atomic war would be very probable, in my opinion, sooner or later.

Mr. ANDREWS. That is not the answer to my question. The question is this: As long as we retain our retaliatory capability, equal to or greater than it is today——

General WHITE. I do not think it is probable, but I think it would be so disastrous if it did happen that we must never let our guard down.

Mr. FLOOD. That is not the question.

Mr. ANDREWS. My question is this: As long as we stay as strong as we are today——

General WHITE. I think that would never happen.

Mr. ANDREWS. In other words, if we keep up our retaliatory capability and they know it, do you think they are going to start an all-out atomic war?

General WHITE. I do not think so.

Mr. ANDREWS. Thank you.

General WHITE. On the other hand, I wil point out another thing: They could have technological breakthroughs with weapons we know nothing about which would completely upset the applecart and, again, your question is so framed that I suppose that would not apply, but we could think we had everything and we would not have it.

Mr. MAHON. There is always the possibility of war in a world of the type in which we live. I do not mean the probability, but possibility, by miscalculation, and otherwise.

General WHITE. And, the penalties are so great we must never fail to do all we can do.

SOVIET ANNOUNCEMENT ON AIR STRENGTH

Mr. OSTERTAG. General White and Mr. Secretary, we have been discussing here rationalization, intelligence, retaliation and deterrent forces. Recently it has come to public attention that the Soviets and Mr. Khrushchev are going to make very drastic changes in their strategy and in their developments. It might be said that their air force is in a status of phaseout, and that a greater concentration of missiles will be in order. Also, it is implied that the ground forces will be sharply reduced.

How does that fit into the picture as to the question of diversified strength and retaliation on their part, assuming it is correct?

General WHITE. I believe that it is possible. The Russians may have made some fundamental decisions. They may have recognized that the key to modern war is what I am going to term aerospace power, which has been the theme of the Air Force for many years. I think they may have faced up to the facts of life and are concentrating almost the majority of their military resources in that field.

On the other hand, as to the segments of that, I would have to be shown, because we have plenty of information that their manned aircraft are continuing to be exercised and maneuvered at a very high rate, in fact, at an increased tempo. We do know they are going ahead in the ballistic missiles.

Mr. OSTERTAG. But, they are not producing aircraft.

General WHITE. According to our intelligence, they are continuing production at a reduced rate of their heavy bombers. When we have

intelligence to the contrary that is well confirmed, then I will believe that he does not intend to go on with the production of manned bombers.

We also have intelligence that they are developing new bombers. There are, very probably, new weapons that we only have the slightest inkling on today that they are working on. So, I believe that they probably are cutting their ground forces. I do not believe they could possibly put out a public notice that they were taking, I think it was, 250,000 officers out of their armed forces, if they were not really doing it.

It would cause too much furor even in their own ranks, over which they have great control.

I have no doubt that they are going through some fundamental changes. They may be doing it very quickly; whereas, we seem to be doing it somewhat on an evolutionary basis.

ADEQUACY OF DEFENSE BUDGET

Mr. MAHON. I would like to pose another theoretical question, and I am not so sure that this is worthwhile for discussion, but I would like to pursue this matter a little.

Except for budgetary considerations, there is strong indication that, to my mind, we would probably now have a Department of Defense budget of about $51 billion instead of about $41 billion, but the forces of Government and public opinion have been such that we have a military defense budget of about $41 billion.

Except for the budgetary considerations, I have no doubt that it would be at least $10 billion larger per year.

Do you think we have followed the right trend, General White, in recent years, with a budget in the area of $41 billion, or has it been a mistake?

General WHITE. I think Mr. Whitten discussed pretty thoroughly and ably the theory that supports that.

Mr. MAHON. But I want your opinion.

General WHITE. It is beyond my purview as to whether it is the right thing to do overall. From a military point of view, I am perfectly certain that a $41 billion total budget is adequate for the defense of the United States. On the other hand, just as Mr. Gates said, I would not cut up the pie the way it was cut up.

Mr. MAHON. Well, you are unhappy to some extent because of the cancellation of the F–108. You probably are very disturbed over the downgrading of the B–70 program, and there are a lot of things that have been favored by members of your staff in recent years where budgetary limitations have been important factors in the picture.

I am exploring the wisdom of the choices we have made. In a way, you have said if you were given a much larger share of the $41 billion, all right, but that is what every service would say.

General WHITE. Somebody has to sit in judgment, and I think that is one of the reasons, or the main reason, we have the Secretary of Defense, and one of the reasons we have a Commander in Chief.

Mr. MAHON. In your judgment, have our mistakes been extremely serious with respect to our military programs in recent years? There is no doubt that we have made mistakes, and we would all have to agree.

EFFECT OF BUDGET DECISIONS ON FUTURE PROGRAMS

General WHITE. I worry about the future more than I do things that have taken place up to date. There are a number of fields—and you have touched on the B–70, for example—which have their impact in the future rather than in the immediate situation. I think we would all agree on that. But, I would say that one thing right now is that I wish we had more ICBM's in our program—as of the present and right now. I cannot say that not to have them would be fatal, because I do not think we have an ineffective deterrent force. I am satisfied that we have an adequacy as of now. But, there is no question about it—we would have more insurance if we had more ICBM's.

The same thing is true if we can go into more aircraft with reference to the B–52. If we had more of them we could carry on a greater airborne alert than even we proposed, and much greater than we've got.

Mr. MAHON. You and I will agree that we could have more ICBM's today and tomorrow and the next day had we determined to do so.

General WHITE. Had we cut the pie differently.

Mr. MAHON. Yes; had we cut the pie differently.

General WHITE. Yes, sir; or had more money.

Mr. MAHON. Or had more money.

General WHITE. Either one.

I would like to be real honest on the ICBM. I think I was guilty last year of saying I did not favor some of these heavy liquid fuel ICBM's because at that time the ATLAS had not proved out. Suddenly it proved out and now I have revised my thinking. But at that time it looked to me as though we had about the maximum that was wise to provide money for.

Mr. MAHON. You are almost saying that you think the position assumed by this committee with respect to the ICBM and its acceleration was wiser than the decision of the Department?

General WHITE. I think it is perfectly obvious, sir, because you did appropriate some extra money, and you find in this program we have recognized the error of our ways and are not only asking for an increased number of ATLASes, but also for TITAN.

NEW HIGH PERFORMANCE BOMBER PROGRAM

Mr. MAHON. At luncheon I went over a series of questions with some of the members of the staff, and I would like to propound these questions to you.

With respect to the B–58 and the B–70—these are very important questions—we know from previous testimony that the B–58 is becoming operational, and is a good airplane.

General WHITE. Either one.

Mr. MAHON. General Irvine and others told us that last year. We also understand that there is an advanced version under study. Is that the B–58–C?

General WHITE. They call it the JB–58, I think.

Secretary SHARP. It is the B–58–C.

General WHITE. The company called it the JB–58.

Mr. MAHON. Would the advanced version provide an airplane with a continuous supersonic cruise capability for its whole mission?

General WHITE. It would, sir. However, I think others would be more expert on the details.

Mr. FORD. The answer is "yes"?

Mr. MAHON. How much sooner would this advanced version be available for the inventory than a new supersonic cruise airplane such as the B–70?

Secretary SHARP. I think it would be interesting to have Dr. Charyk respond to this question, because he is in the scientific section.

Dr. CHARYK. If I might consider the answer to the first question, in order to achieve the ranges—intercontinental ranges—that would be of interest, it would, of course, have to be refueled in the case of the all-supersonic B–58, and during the refueling operation it would obviously not be a supersonic mission. So to that extent I would qualify the answer to the first question.

In regard to the question of availability, I believe that it would be possible if we were to go ahead with this program to achieve the first operational squadrons in 1963.

Mr. MAHON. Of the B–58?

Dr. CHARYK. Of the all-supersonic B–58.

Mr. MAHON. Yes. Well, is not this a very critical time when we would like to have this capability?

Dr. CHARYK. I think it is; this is one of the reasons why the possibilities of this type aircraft are being looked at very seriously.

Mr. MAHON. The Secretary of Defense told us your present plan was to close out the program with 116 planes at a cost of $3 billion-plus.

Dr. CHARYK. The proposal to develop an all-supersonic B–58 is of rather recent origin. As a matter of fact, it came shortly on the heels of the cancellation of the B–58B. We have not had, as of the present moment, an adequate opportunity to look at all aspects of the all-supersonic B–58, but this is a proposal that has been looked at very seriously at the present time.

Mr. MAHON. Can you answer my question here? How much sooner would this advanced version of the B–58 be available for the inventory than a new supersonic B–70?

Dr. CHARYK. By at least 2 years on the basis of the dates that have been suggested.

Mr. FORD. Would that mean if both are pushed at a maximum rate?

Dr. CHARYK. 1965 would be an operational date for the B–70 as compared to 1963 for the all-supersonic B–58.

Mr. MAHON. You said 2 or 3 years with the B–58C. Would this early availability be especially desirable to augment our bomber penetrating capability while our ICBM missile strength is being built up?

Dr. CHARYK. I think there is little question that it would be attractive to have a supersonic bomber of this range in this time period.

Mr. MAHON. Why do we not try to get it?

FUNDING LIMITATIONS ON AIRCRAFT PROGRAMS

Dr. CHARYK. The thing we are looking at is really whether this kind of capability is technically feasible within the kinds of dollars that are being talked about, whether it can do the job, and how it will compare with the kind of capability that would be achieved by other means.

Mr. MAHON. Since a large sum has been invested in the B–58 development program and since few airplanes are now planned for the inventory, would it be desirable to exploit this investment further by allowing the proposed advanced version to go forward as substantially all other SAC bombers have gone forward in the past? We had large numbers of B–17's, we had fantastic numbers of them, of course. We had the B–50's. We had the B–29's.

General WHITE. We have had nine types since before World War II.

Mr. MAHON. There are more than 600 B–52's. Does it make sense to chop off the growth of the B–58? I do not make this argument, I hope, because this plane is being produced in my State. It is certainly not produced in my area by any means and has no impact that I know of on my area. I am just speaking as a Member of the Congress and as a member of this committee. Does it make sense to chop this thing off and pay $3 billion for 116 airplanes?

Secretary SHARP. I would say, Mr. Chairman, if I might, it certainly is worth very serious consideration and we are giving it very serious consideration, the feasibility of going into this kind of program. It has certain elements of interest but it has not been wrung out yet scientifically in order to know whether the claims of the company are sound.

Mr. MAHON. What is your present view on this, Doctor?

Dr. CHARYK. I think on the basis of the information we have seen so far, it is attractive. We have conducted wind tunnel tests in order to determine whether we can achieve the kind of lift-drag ratios proposed. We have looked at the kind of engine performance data that has been proposed with a view to assessing the reasonableness of the data in this time period. Wind tunnel tests, for example, have been in progress over the last month in order to verify these very important elements in determining performance of this type aircraft.

Many other things must also be investigated. The extent of the redesign that would have to be undertaken, whether in fact we are talking about a completely new airplane, or whether this in fact is a modest modification of the 58 as we know it.

Mr. MAHON. Would the cost of such a program be only a fraction of a completely new airplane like the B–70?

Dr. CHARYK. If the modifications are modest, as the contractor has suggested, then in fact the cost per airplane as compared to the B–70 would be significantly lower.

On the other hand, I should add there would also be a difference in capability, so that you have to match your dollars versus your differences in capability as well as the differences in time.

Mr. MAHON. I believe we have had testimony indicating that the B–70 would cost about $3 billion plus, through about 1965, and then you would only have——

Mr. ANDREWS. Five and a half.

Mr. MAHON. From $3 to $5½ billion, in that general area, and you would not have a significant number of planes by that time. Will you correct me if I am in error?

General BRADLEY. That is essentially correct.

Mr. MAHON. That would be the cost of the B–70 program. How recently have you given consideration to advanced versions of the B–58? I thought you had been giving consideration for weeks, probably, to the new version; is that correct?

Dr. CHARYK. It has been weeks, yes. As a matter of fact, the wind tunnel tests, I believe, originally were carried out probably the latter part of November. There were some additional tests, I believe, in December.

Mr. FORD. Was this proposal submitted in time for consideration for the 1961 fiscal year budget?

Dr. CHARYK. If my recollection is correct, the proposal was submitted at the time that the 1961 budget was in final discussions. It was very late in the formulation of the 1961 budget.

Mr. GARLOCK. It was not in time so that there could be an evaluation of the proposal before finalizing the budget because the proposal is not finally evaluated yet. It came 6 months late to get into the normal procedure in the 1961 budget.

Mr. MAHON. If you took half the money required for the B–70—I am not arguing against or for the B–70 or B–58 but undertaking to put some facts here on the record and develop the information for the committee—if you took, say, half the amount of money you would need to spend on the B–70 and put it on the B–58, where would you come out by way of fighting airplanes?

General BRADLEY. I do not think we have an exact figure on it, sir, but I would estimate if you bought about the same number of airplanes, it might be about around half.

Mr. MAHON. Half of what?

General BRADLEY. The money.

Mr. MAHON. About half the cost?

Mr. GARLOCK. Half the money on the B–70.

Mr. FORD. Two years earlier.

Secretary SHARP. If it does not require a great deal of redesign, as the company indicates. We have not yet evaluated this.

Mr. GARLOCK. Sometimes people quote these figures backward. Remember that these are company estimates, not Air Force-verified estimates, and it could be by the time we get through we would have slightly different versions of what the airplane will do and what it will cost.

Mr. MAHON. It has been my observation that always we are given rather enthusiastic reports as to what any new weapon can do.

Mr. GARLOCK. Company proposals tend to be rather high on performance and low on costs.

Mr. LAIRD. That is true of both planes, is it not?

Mr. GARLOCK. That is a general statement for all systems, not just this one.

General WHITE. There is one essential difference, however, sir. Our experience with, shall we say, retread aircraft is vastly different from the production of an airplane that was built according to a specific purpose. The B–58—I would like to get into this later—would be an airplane which had been modified from one configuration to another, whereas the B–70 is on the line of its original concept. I would point out that we have had a rather sad history with the retread over the years.

Mr. MAHON. Always—and properly so, no doubt—you would like to have the very best thing configured for the exact and specific job. Last year we talked about giving the mission of the F–108 to the B–58. The B–58 people were making that sort of pitch as I understood it to the Department of Defense and the Air Force. But some improvi-

sation, if not disastrous, could be tolerated in the interest of speed and economy. We do that in life generally, do we not, General?

General WHITE. Yes.

Mr. FORD. Mr. Chairman.

Mr. MAHON. Mr. Ford.

B–58 AS A TRANSPORT PROTOTYPE

Mr. FORD. Does the B–58C have the potentialities that the B–70 might have for a transport plane, the most advanced in the history of the world?

General WHITE. From where I sit, it does not have any at all.

General BRADLEY. The B–70 is a new class of airplane and leads into a new field of airplanes that go mach 3. The other airplane goes up to the level of mach ——— and stops there. It can never go farther.

Mr. FORD. It does not have the transport capability in the future?

General WHITE. What General Bradley is trying to point out is this. I agree and I am not in any way degrading the claimed capabilities of the revised B–58, which may well be a good thing, but it does not, in my opinion, in very great degree serve as a substitute for the B–70 for the reason that General Bradley was about to bring out, I think, when I interrupted him. The limit of flight speeds in the B–58 is where you begin to get in the heat barrier, whereas the B–70 is a whole new flight regime and would be a breakthrough in the science of aeronautics. There are many other aspects but that is one of the major differences.

Mr. FLOOD. Before you start worrying about modifying the B–58 to make it a Mach–3 fighter, why not get the bugs and pigeons out of the B–58 you are starting to fly? My information is, that is by no means a prize ship itself, the one you are taking into the force. You have a problem with the B–58 to begin with before you make it something else. I am not satisfied with the B–58 at all. In 1 year they did not make it so good. Last year it was a serious problem, the B–58.

Secretary SHARP. I was trying to find experts here who may be able to answer that better than I can.

Mr. FLOOD. Let us talk about the B–58.

Mr. MAHON. General Bradley can talk about the B–58.

General BRADLEY. The B–58 is doing very well. We have had some troubles.

Mr. FLOOD. That is the understatement of the day.

General BRADLEY. We always do. Today the plane is operating very well, the bomber navigation system is working well, which we had trouble with in the past. We have a test squadron running at Carswell, putting in a lot of flying, and the airplane is operating well and meeting its specification requirements.

Mr. FLOOD. Do you not think, with our experience, after all the years we have gone through these things with airframes in this committee, this man knows his business, he says it is operating very well. That is as far as General Bradley is going to go on January 22. That is not far enough to start making it something else. You started fooling around with a B–47 with trick bombing and you know how we

messed that one up. We wrecked that airplane trying to do tricks with it. Leave these things alone. You do not have this pigeon flying yet.

Mr. WEAVER. Mr. Chairman.

Mr. MAHON. Mr. Weaver.

B–70 IMPRACTICAL AS COMMERCIAL TRANSPORT

Mr. WEAVER. Last year one of the high officials of Boeing Aircraft Co. told me he doubted whether it would be practicable to operate the B–70 and those types of planes from a transport standpoint, because of the economies of operation and the facilities that would be required, and that the present jet aircraft we have as transport facilities are here to stay for many, many, many years. Would you comment on that in view of what you were discussing?

General WHITE. I would say as a civil transport it would certainly have a very specialized purpose, but as a troop carrier with atomic Army weapons, where cost of operation is not the prime consideration that it is with the airlines, I am sure it can successfully carry about 60 people or, say, six of the HONEST JOHN Army weapons with their serving crews.

Mr. FLOOD. And launchers?

Secretary SHARP. Every time a new airplane is thought of there is a large group of people who think it cannot be successful. I think this has probably been true in the complete history of aviation. When the first plane flew, people thought it would never be practical. I think this is undoubtedly true with the B–70. It is a brand new design, a tremendous step forward. I am sure they could not take the design of the B–70 and make a practical commercial transport out of it, but they will learn scientifically enough, I think, some day to have a commercial transport which would be practical.

Mr. WEAVER. I was not speaking of whether a B–70 would be practical in the future from a defense standpoint for such uses. I was speaking from the civil transport standpoint entirely.

Mr. FLOOD. Is it not true that the Russian military jet is practically the Russian civil jet except for changing curtains, or something?

General WHITE. The TU–114.

Mr. FLOOD. One has lace curtains and the other does not, which is about the only difference.

General WHITE. The one that brought Khrushchev over here is the equivalent of the Bear.

Mr. FLOOD. Sure, it is.

Mr. MAHON. You say the new proposed B–58 would go about mach- and the B–70 about mach 3. The B–58 flies about three times as fast as the B–52, does it not?

Secretary SHARP. About that.

B–70 A BREAKTHROUGH DEVELOPMENT

Mr. MAHON. Whatever it is. To get 25 percent more speed is it worthwhile to expend the additional money that would be required for the B–70?

General WHITE. Was it worthwhile to spend what we had to spend to go from mach .9 to more than mach 1? There was your big step, which is not as great as the step in going from the sonic barrier through the heat barrier, which is what the B–70 does and the B–58 does not.

Mr. MAHON. You go through the heat barrier with the B–70?

General WHITE. From then on your horizon is perhaps unlimited; whereas, the B–58 is up against the very dead end of aeronautical development.

Mr. MAHON. I am beginning to understand what Secretary Gates meant when he said people are emotional about the B–70. It opens up that bright new world of flight with which we have not had much experience.

General WHITE. And will never get to, in my opinion, unless we build the B–70 or something like it.

Mr. MAHON. I am not arguing against the B–70.

Mr. OSTERTAG. Mr. Chairman.

Mr. MAHON. Mr. Ostertag.

Mr. OSTERTAG. General White, you do plan continuation of the work in the research and development aspects of this craft, do you not?

General WHITE. More than that. The program is for two prototypes.

Mr. MAHON. Let us get into that later, if we may.

So, in comparison of the B–58C and B–70 you get a lot more speed than you have with the B–58A, you get a lot more speed than you have in the B–52. You have 25 percent less speed, however, than the B–70. You saved barrels of money and you get the operational plane during a very critical period in the 1960's. It would seem that this would be very seriously considered by the Air Force. Is that correct?

Dr. CHARYK. I think you have enunciated at least some of the reasons why the proposal is being looked at seriously, why we have encouraged the conduct of wind-tunnel tests.

Mr. FLOOD. Is there a third point? Do you need either one?

Mr. MAHON. We could consider the third point. Can the B–58 use the KC–135 tanker?

General WHITE. Yes.

Mr. MAHON. Would the B–70 use it?

General WHITE. It could, but would not need it.

Mr. MAHON. You would devise a new tanker for the B–70?

General WHITE. Actually, its range is such that it would only be the exceptional mission that you would need to refuel it.

Mr. MAHON. Of course, if you have to go into refueling, you could then refuel either of these types with the 135?

General WHITE. Yes.

Mr. MAHON. If they are refueled, both of them have adequate range, I assume.

General WHITE. The B–70 has without it, sir.

Mr. MAHON. For all targets or most targets?

General WHITE. I would say 95 percent of all targets.

Mr. MAHON. Are you satisfied that you are doing probably the best thing to do at this time with the B–58?

General WHITE. I think we are doing just the right thing, sir. We do propose in our tentative look at next year's budget to ask for money

in the B–58 field. If this proposal appears feasible, we certainly are going to give it a good look. If it does what it says, it would be a very useful weapon. Not being emotional, it still does not replace the B–70.

FUNDING FOR B–70 IN 1961

Mr. MAHON. Getting to the B–70, you have requested how much money for the B–70?

General FRIEDMAN. Our request in the recommended budget was for approximately $456 million.

Mr. MAHON. That is what the Air Force originally wanted?

General FRIEDMAN. That was our original estimate.

Mr. MAHON. What are you asking now?

General FRIEDMAN. The budget request contemplates $75 million.

Mr. MAHON. You argued strenuously, I assume, Mr. Secretary and General White, for the $450 million program for the B–70?

General WHITE. Yes, sir.

Mr. MAHON. This decision was made by the Secretary of Defense or by the President?

General WHITE. I got my orders from the Secretary of Defense, sir.

Mr. MAHON. Did this battle ebb and flow or was there just a stone wall all the time?

General WHITE. A certain amount of ebb and flow in it, sir.

Mr. FLOOD. Have you heard anything about it since?

General WHITE. No, sir.

Mr. FORD. You probably will.

Secretary SHARP. There were a great many opinions in both directions on the B–70. It was a highly controversial issue. I think one of the problems was one that Mr. Flood brought up, whether you need, in this time period, that kind of a thing.

Mr. MAHON. That is a very valid question.

Secretary SHARP. A great many people thought it was not a good way to spend that kind of money and a great many other very capable people thought it was. The decision was to go more slowly on it and wait another year and take a look at the threat and see whether we need it or not, or whether we want it developed as a standby device. Maybe a year or so later we will be able to decide whether we want to put into production as a weapon system. We hold these things in reserve for the very reason I mentioned several times before. Just supposing the Russians should find some way to stop the ballistic missile and we had to fall back on something different. It is not wise, I do not believe, to give up the B–70 and it may be very wise to reinstate it at some future date.

TOTAL COST OF B–70 PROGRAM

Mr. MAHON. It chills me a little to think of spending 3, 4, 5, or 6 billion dollars for just a few dozen of these planes.

General FRIEDMAN. Sir, if I may correct the record, I think the impression was given to the committee that this $5.5 billion would account for a handful of aircraft, in terms of dozens. Rather, that would carry us through ——— aircraft. That would also include all development costs, R. & D. costs clear back from fiscal year 1957 and prior.

Mr. MAHON. It would also include 20 or 30 experimental B–70's, would it not?

General FRIEDMAN. Yes; but it would have been our plan to reconfigure these back to a tactical configuration at some time further down the line.

Mr. MAHON. You would have less than ——— planes and about 20 or 30 of them would not be really suitable for the inventory. You would have spent all that money. It seems to me regrettable to be compelled to develop a plane at such huge cost and only buy a few of them. It seems to me if we do not need but a few, we ought to try to improvise some other approach to our problem, just like the B–58. If we do not want but ——— we should not have had any in the first place, it would seem to me. It hardly seems worth while to develop a B–70 for ——— planes.

General FRIEDMAN. That was just a pricing through that time period. I am referring to the same time period which was discussed in previous testimony. I believe that it could be assumed we could go beyond that point, as the system proved out.

General WHITE. I think it is about that point that the unit cost is $24 million against $8 million for the B–52. I have figures which I cannot find now that show relative costs of aircraft. You have to get further into the number before you get out. I do not remember just where it was. There is some point that it comes out at about $24 million.

QUESTION OF SERVICE BIAS IN PROGRAMING

Mr. MAHON. It has been my observation the Navy will sacrifice almost anything in order to get carriers because the Navy feels, and in all honesty, that the carrier is the Navy—period—more or less. I am asking this in very broad terms. Are we in the Air Force in the position that the Air Force feels that the bomber is the Air Force and that we have just got to have the B–70?

General WHITE. I would not put it in that context, Mr. Chairman. I would say that the Air Force thesis is that you need a certain mix from here on out for many reasons. I would be glad to go into them. If you make the assumption that a manned aircraft mixed with intercontinental ballistic missiles is a requirement for the future, there comes a time when the B–52 and, for that matter, the B–58 or the advanced B–58 becomes obsolescent.

Based on the original thesis, you then must have a follow-on aircraft. The B–70 is the ultimate in manned aircraft development which the state of the art permits as we now have it.

Mr. FLOOD. Mr. Chairman, let me be the devil's advocate again to a third point. As you pose it, not as my friend has stated but as you pose it, a very interesting question, there is the third point again. Is there not every indication in the world that the Navy is not going to get the carrier and that the Air Force is not going to get the bomber and they are both wrong? That is the third position.

General WHITE. To say there is not a deeply ingrained prejudice in favor of aircraft among flyers would be a stupid statement for me to make. Of course there is. I think we have shown, as evidenced by this budget, a very considerable concession in that direction inasmuch as the procurement this year is much greater in missiles than

it is in aircraft, for the first year, I believe. We honestly believe there is a requirement for both. I can cite some very good reasons.

Mr. MAHON. You do not have to use the word "honestly." We give you complete credit, you and all your colleagues in all the services, we give you complete credit for sincerity and honesty of view. Of course, you have these views against a certain background of experience that would have some effect on those views.

General WHITE. It is only from that experience as a professional military airman and from the limitations of my position as Chief of Staff of the Air Force that I make this sort of talk about the B–70.

Mr. FLOOD. The procurement for aircraft for this fiscal year, as stated by the Secretary in this budget, is four or five hundred million dollars more for aircraft than for missiles. The total figure for procurement for aircraft is three or four hundred million more than it is for missiles.

Mr. MAHON. I do not think you want that for the record. Mr. Ford has asked me to yield.

Mr. FLOOD. I will read the statement.

Secretary SHARP. Our new obligating authority for aircraft is $2.99 billion. Our new obligating authority request in this budget is $3.02 billion for missiles.

Mr. FLOOD. I will read the first sentence on page 9, under aircraft procurement, and I quote:

> The amount requested for aircraft procurement is the major source of financing for a planned program of procurement totaling $3,910 million, which will provide 633 aircraft.

Secretary SHARP. This is the program.

General FRIEDMAN. If I may explain, Mr. Flood, in one instance you are referring to a program figure, which is the total cost to initiate contracts for deliveries over the natural leadtime of the aircraft.

Mr. FLOOD. I know that.

General FRIEDMAN. We would ask for new obligating authority, which would be a net from that requirement, reduced by carryovers from prior years—advance credits made previously.

In the instance of the missile appropriation, we procure generally a 1-year level of effort. We do not go to a contractor and sign a contract for delivery of a specific number of missiles over a period of years. So in the 1961 budget, in the instance of missiles, the program figure and the new obligating authority are the same. This is not true in the instance of the aircraft. Confusing this is a very understandable thing.

Mr. FLOOD. At most, there is not enough difference to make it a material argument. Pretty close.

General WHITE. May I say I think it still makes my point, that the Air Force——

Mr. FLOOD. That you have even gone that far. You have even gone that far. Mirabile dictu.

AIR FORCE OPINION ON B–70 PROGRAM

Mr. FORD. Was there unanimity of opinion in the Air Force to request $456 million in fiscal 1961 for the B–70 program or was there unanimity of opinion in the Air Force to request the B–70 program to be partially financed?

General WHITE. I think I will have to put it this way, sir. There are two major review groups within the headquarters of the Air Force. Obviously, when you say "the Air Force," I assume you mean headquarters. We did not take a poll. There is the weapons board and there is the Air Force council. I would not like to have the records of these organizations normally exposed, but this is a good time to answer the question in clean-cut terms. At the time this was under consideration, we had both the F–108 and the B–70 in the program. We were told, and it was clear, that, No. 1, we could not have but one of these manned aircraft and that the budget would not carry but one, if it would even carry one. The weapons board went on record that we should have both, but if we could only have one, we should have the F–108. The Air Force council, which is the higher body, just exactly reversed it. They said that we should have both, but if we cannot have but one, we should have the B–70.

It came to the Chief of Staff, who spent many sleepless nights over this problem, and decided from many factors that if we could only have one, the B–70 was it. I based that largely on what would be the greatest threat to the Soviet Union, and, hands down, the B–70 wins that argument, in my opinion.

Secretary SHARP. Mr. Chairman, to indicate further that there were two sides to the question, I was not so strong for the B–70 as the Chief of Staff, and we have had some very heart-to-heart discussions about this, because I do not like to be at differences with the Chief of Staff of the Air Force.

There are points on both sides, and I think they are very valid points. I wanted to point out it was a controversial issue and there were two sides to it.

Mr. MAHON. As indicated by these decisions, there were two sides. Were you unanimous in your final decision on the $400-million-plus program for the B–70? That was the question I understood Mr. Ford asked.

General WHITE. I doubt that was put to any body that was unanimous, because the final formulation of the budget is between the Secretary and Chief of Staff, with the assistance of the budget officer. The number of permutations and combinations we had before we finally arrived at the budget would be impossible to unravel at this point.

Mr. MAHON. We do not want you to unravel all of them, but on the general features, can you tell us, General Friedman?

General FRIEDMAN. Given an assumed first-flight date and a given operational date, in which there was no argument, the required amount of procurement funds to carry through to those two milestones was $456 million.

I do not think there was any argument in the Air Staff on that, nor do I recall in my many discussions over a period of months with the people in the Office of the Secretary of Defense that that pricing was inaccurate.

Mr. MAHON. In other words, it was repugnant to the Air Force, I am sure, to do anything other than proceed to an operational B–70 for the Air Force. Am I right or wrong? The point is that you did not want any prototype program; you did not come with that recommendation. That was what was done in rejection of your real

request for a B–70 program totaling about $400 million-plus. Is that right or wrong?

General WHITE. That is correct, sir; and the Air Force budget, as submitted to the Secretary of Defense, did contain the $450 million.

DELAY IN B–70 PROGRAM

Mr. LAIRD. One further question here, Mr. Chairman. The decision that was made at the Secretary of Defense level, and, as I understand it, supported by the Joint Chiefs of Staff, does not change the date projected for the B–70, as far as a military aircraft, more than about 6 months. It does not change it the full year.

General WHITE. It changes it nearly 2 years.

Mr. LAIRD. You say by delaying the full funding for 12 months it changes it by 2 years?

General WHITE. Yes, sir.

Secretary SHARP. I can give you some indication of that. The program for 1960 was——

General WHITE. We had to go back and to cut out 1960 funds.

REDUCTIONS IN B–70 FUNDING

Secretary SHARP. We cut out $200 million in 1960 as a result of this new program, which delayed it more than just the cutting out of the difference between the 400-some-odd-million for 1961 and the $75 million. We also reduced the effort in 1960.

Mr. OSTERTAG. How much money do you have for research for the B–70? Is it 75 now?

General WHITE. That is right, sir.

Mr. OSTERTAG. May I inquire as to how much is currently on hand?

Secretary SHARP. 150 for fiscal year 1960.

Mr. OSTERTAG. Does that mean there is $225 million in this program?

Mr. GARLOCK. This is not quite that simple. During the first half of this year, General Friedman, please give the figure, the rate at which we spent during the first half. This is the story, because we were going at a rate, spending a given amount of money, and with the change we dropped to a lower rate in the second half of this year and continue that lower rate next year.

General FRIEDMAN. Yes, sir; we were carrying the B–70 in fiscal 1960 against a procurement program of about $342 million. At the time the decision was made it appeared that there was about $150 million of that committed—beyond recoupment.

Therefore, on our judgment to get in line with the revised decision, the minimum amount that you could put on the aircraft in fiscal year 1960 was approximately $150 million. This is where it stands now. Then we would carry on with $75 million in 1961. There was no way you could, at midyear, point, cut lower than that in the preceding year.

Mr. LAIRD. That explains it.

Mr. OSTERTAG. Is it true that you do have $150 million and $75 million more in the budget, so that from the standpoint of dollars there is $225 million in the pipeline for this program? I am not trying to establish what it did to your timetable.

General WHITE. In the years prior to 1960 there was some money spent. There was some money spent in 1958.

General FRIEDMAN. About $208 million in the preceding year—fiscal year 1958—and, if the appropriation of $75 million is made in fiscal year 1961—and if we proceed—then I would say essentially you are right, Mr. Ostertag, there would be some $225 million of new financing through the latter 2-year period.

Mr. MAHON. If it is not already clear, when this record comes to you, put in the record at this point how much we have previously provided for the B–70; how much of it has been spent or committed, and how much is in the present budget, and what it all adds up to.

(The information requested follows:)

B–70 program

[In millions]

Program year	RDT & E	Procurement	Total
Fiscal year 1954	$0.5	0	$0.5
Fiscal year 1956	7.9	$4.5	12.4
Fiscal year 1957	14.0	33.9	47.9
Fiscal year 1958	12.0	66.5	78.5
Fiscal year 1959	16.9	208.4	225.3
Fiscal year 1960	0	[1] 150.0	[1] 150.0
Fiscal year 1961	0	75.0	75.0
Subtotal	51.3	538.3	589.6
Facilities			13.4
Total program			603.0
Obligations to date			436.2
Expenditures to date			317.0

[1] This is the amount now programed for the B–70. The amount included in the program approved by the Congress for fiscal year 1960 was $345.6 million.

General WHITE. There is, of course, the aspiration that has always existed in the Air Force to fly higher, faster, and farther.

Mr. MAHON. There is nothing unworthy about that.

AIR FORCE ARGUMENTS FOR MANNED AIRCRAFT

General WHITE. There are three points that I think are rather overlooked. One is technical, which we have spoken of, going into an entirely new regime in aeronautics; one is perhaps psychological and one is tactical.

On the psychological side, if we have the ultimate ballistic missile for submarines, is this Nation going to put its major defense on static and unseen weapons systems? I cannot conceive of a greater Maginot concept than year after year having men polishing these ballistic missiles with a blitz cloth and our telling our allies and our enemy too, if he should come out with a supersonic aircraft—and I am certain aeronautical science is not going to stand still—"You ought to see all the missiles we have in holes in the ground and all the submarines that we have under the seas." That is the psychological Maginot-line side of it.

Then the third one is a very practical tactical point. Conceive of a situation where we have missiles. Conceive of an effective warning system that gives 15 minutes' warning of an incoming ballistic

missile attack. We read on the radar all of these blips coming in. Now, there is 15 minutes in which the President can make up his mind to say, "Go," or "Do not go." On the basis of this incoming warning it is not likely, in my opinion, you will get word to the troops in that 15 minutes.

On the other hand, with an aircraft—and again we have to assume we are going to keep the aircraft modern, and I am talking about the B–70 in this case—the commander himself on the spot can——

Mr. MAHON. The B–58.

General WHITE. All right, but the B–58 will be obsolete—the commander himself launches his force. It is on the way to the target under the positive control system.

Mr. LAIRD. That is also true of the POLARIS.

General WHITE. Yes, indeed.

Mr. FLOOD. And also the MINUTEMAN. It is mobile.

General WHITE. It is true of [those] missiles. [The B–70] gives time and they are as invulnerable as anything can be. They are in the air and cannot be taken out on the spot. This is in addition to the various technical reasons—their application with big bomb loads and all the other things that are familiar to you and which you hear so much about.

Mr. MAHON. We are in this interrogation seeking to be provocative. We want to get at the facts. We want to stimulate you to give us your true views. We have really not undertaken to express many of our own. Certainly I do not believe anybody on the committee believes that the airplane is going to be phased out of the military picture within the lifetime of most of us here. I do not think that is true at all. We just want to be sure that we know where we are going insofar as we can, and what the costs and risks are.

General WHITE. If I may say so, most properly so. I do not feel that I am fighting for the life of manned aircraft. I am sure its need is so obvious.

LOSSES OF AIRCRAFT PROGRAM CANCELLATIONS

Mr. MAHON. I think that we are going to have aircraft regardless of you or me or this committee. One reason why I am pressing this matter so hard myself is that last year I said near the end of the hearings—Gentlemen, I am led to believe you are going to cancel the F–108. Nevertheless we gave you the money. Within a few weeks you did cancel the F–108.

I am not a prophet, but in this case you did cancel it and there was a lot of money thrown down the drain. The Navy after spending $400 million on the SEAMASTER, canceled it, and you threatened to cancel the B–58 last fall.

The Department canceled the BORON fuel program and REGULUS II. Let us be sure that we have made up our minds on the B–70 if we are going into it, and let us go into it with all of our might and let us plan to have more than—B–70's.

Mr. FLOOD. What makes you think that the Bureau of the Budget will give you the money? The general forgets that the Bureau has more stars than he has in his wardrobe.

General WHITE. No, sir. It is an interesting thing, the history of bomber development. I had a study made of that. Including the

B–17 and from then on, we have developed nine bomber types. That may seem excessive, but you must remember four of them were in World War II. Six of those nine were practically dead many times. The B–17 almost did not make it. The B–50 almost did not. The B–32 did not make it very long. I do not have all the types and history at hand, but it is there for all to read. Nearly every bomber we have had has been in great jeopardy, and I think history proves we have been awful glad we have had every one.

Mr. OSTERTAG. They were obsolete before they could be used.

General WHITE. It would have been better to have gotten them sooner than we did. They were delayed, canceled, almost dead, picked up again and canceled again and then picked up.

Mr. MAHON. Do you feel sure this B–70 will not be canceled?

Secretary SHARP. I cannot be sure of anything. I can only be sure of the fact that the President said in his state of the Union message that the B–70 was going to be carried on in this fashion we described before with the idea of taking a look at it a year from now.

Mr. LAIRD. I understand how this 1960 funding change makes a change in the program. What will it cost to get a prototype B–70 flying at the earliest practical date?

General BRADLEY. We do not have a figure with us as to what it would cost additional today to make it fly at the earliest practical date. We have a date now set.

Mr. LAIRD. That is what I want.

General WHITE. You mean the earliest practical date?

General BRADLEY. August 1963.

Mr. LAIRD. And that date remains the same even though this 1960 funding has been changed? I thought that that would make a difference in the date because the 1960 funding has been changed.

Mr. GARLOCK. The airplane to fly in August 1963 is not the same kind of plane that will fly in August 1963 in the other program.

General BRADLEY. The aircraft is now scheduled to fly August 1, 1963.

The study underway indicates that it might be pushed up to December 1962. I am not willing to say that yet.

Mr. LAIRD. It would not require any more funding?

General BRADLEY. No more funding.

Mr. FLOOD. While you are talking about aircraft will you get for me for the record what will be the earliest possible date for a nuclear-propelled aircraft, any time, anything that will fly, but nuclear propulsion. I do not care about the speed, height, or anything.

General BRADLEY. We can give you the figure.

(The requested information follows:)

EARLIEST POSSIBLE DATE, NUCLEAR PROPELLED AIRCRAFT AND COST

It is estimated that if we are to start on July 1, 1960, toward an earliest possible flight date for a nuclear propelled aircraft, this could be accomplished in about 4 years or between July and December 1964. This aircraft would not be a weapon system. It would not meet tactical requirements but would be one capable of complete nuclear flight.

It is estimated that to accomplish this flight date, approximately $300 to $350 million would be required spread over fiscal years 1961 through 1965.

The committee will stand adjourned until 10 o'clock Monday morning.

MONDAY, JANUARY 25, 1960.

MANNED BOMBER PROGRAMS

Mr. MAHON. We will resume the hearing. On Friday when we last met we discussed at some length the B–58 bomber, which is now operational, and the B–70 bomber, which we have put considerable money into and which is one of the controversial items in the current defense program and in the current defense budget. I am most anxious that this record be sufficiently ample to enable us to read it and tell what the basic facts are in this controversy. I doubt that the record is at present sufficiently clear on the difference between the B–70 program as recommended by the Air Force to the Secretary of Defense and as recommended by the Bureau of the Budget to Congress. You have said that the budget provided for the construction of prototypes. How many would there actually be?

General WHITE. The program leads to two.

Mr. MAHON. Two prototypes. I understand that this would be the frame and the engine; but, generally, all of the military counterpart and the buildup and weapons system and the things which would be necessary for giving us an operational capability in using this plane in combat are not a part of the 1961 budget. Am I correct?

General WHITE. That is correct, sir.

Mr. MAHON. Will you please make clear the difference in these two things. I remember you pointed out on Friday that you could make a decision next year as to going ahead on a broader base for the B–70; but, aside from that, I understand I state the issue correctly. If I have not, please clarify it, Mr. Secretary.

Secretary SHARP. The only thing I can add is on the bomb-navigation system. We are tentatively planning to keep the team of scientists who are working on that system together, and go slowly along with the system on the recommendation of the scientific community, who say that we should go along on that system, even though modified, because this is the important thing if we decide to make a bomber.

Mr. MAHON. Please spell out for the record just what the Air Force proposed for the B–70 in its presentation to the Secretary of Defense and what is proposed in this budget. I want it submitted to the committee and then incorporated in the record if we think desirable. I am doing that to save time and in order to prevent rehashing it. We must understand the difference between the two B–70 program ideas.

Secretary SHARP. I think we can make that very clear.

(The information requested is classified and has been furnished for the committee's use.)

PROCUREMENT OF ADDITIONAL B–52'S

Mr. MAHON. Why do we go on buying the pokey B–52? I call it pokey, relatively speaking, because it is not in the same speed class with the B–58 and the proposed B–70.

General WHITE. There are two major reasons. First, it is the best airplane we can produce at the moment in its class and it is in production. It is the only airplane that has a capability for airborne alert. Second, there is a vastly improved model with a new engine coming on

and it will carry the HOUND DOG air-to-surface missile. Those are the major reasons for its continuation.

Mr. MAHON. You can elaborate that for the record, if you like.

(The information requested follows:)

B–52 PROGRAM

The major reasons for continuing to buy the B–52 fall into three main categories:

1. Offensive weapon delivery capability.
2. Penetration capability through the mid-1960 time period.
3. Potential for accomplishment of long airborne alert missions which may be forced upon us as an interim method of mission success.

The B–52 most certainly has the greatest range capability both unrefueled and refueled of any aircraft which we now have or which we have currently programed. It has the inherent physical characteristics and capability to carry very large internal payloads and the required wing structure for multipurpose usage, such as the air-to-surface missile, decoy rockets, etc.

With the addition of certain penetration aids, the evolution of new tactics, such as low level, and marked improvement in its range capabilities, the B–52 should maintain a high probability of penetration success until at least the mid-1960's.

In addition, if the Air Force is forced into long airborne alert missions as an interim method of mission accomplishment, the B–52 possesses all of the necessary prerequisites of this type mission. By this we mean long range, high payload, high reliability, complete operational flexibility, positive communication control, highly trained crews and in-being facilities.

Mr. MAHON. You recognize that the B–52 is somewhat vulnerable to air defense, I assume.

General WHITE. I think any weapon except the ballistic missile at the moment is somewhat vulnerable, but we have no question in our minds that with varied tactics plus countermeasures that the manned aircraft—the B–52, B–47, B–58—all will be able to penetrate, now and for a good many years into the future.

Mr. MAHON. Will you give us the maximum and maybe I should say optimum speeds of the Boeing 707 passenger plane and the Douglas DC–8 jet aircraft and the B–52 and the B–58 and the estimate for the B–70. Could you give us a statement with respect to that?

General WHITE. Yes, sir. We have the KC–135 characteristics here.

Mr. MAHON. I am speaking of the speed only.

What is the fastest speed of the commercial jets?

General HOLLOWAY. Between the 707 and the DC–8, the 707 is a little faster. I think its speed is approximately between 10 and 15 knots faster. The top speed of the 707 is about 0.9 to 0.92 mach.

Mr. MAHON. In other words, it is not supersonic?

General HOLLOWAY. No, sir, it is not. The B–52 is approximately the same. Its top speed is about 0.92 mach. None of them are supersonic. The B–58, however, is supersonic. Its speed is a little in excess of mach 2, but only for a limited period of time.

Mr. MAHON. What is the optimum or what will be the ordinary cruising speed of the B–58? Please include the B–58–A and proposed improvements in your answer for the record.

(The information to be supplied follows:)

Comparative speeds, cargo-passenger type aircraft

[In knots]

	Boeing KC-135	Boeing 707	Douglas DC-8
Cruising speed	458	490	474
Maximum speed	496	500	490

Note: Additional classified information was furnished the committee.

JOINT CHIEFS OF STAFF

Mr. MAHON. I would like to get briefly into this issue of the Joint Chiefs of Staff. Last year we said the Joint Chiefs of Staff were not doing an adequate job. We said they were very fine, capable, loyal men, but we said that they were not adequately facing up to the necessity for realistic hammer-and-tongs discussions over the big issues which are confronting the Congress and the country.

What was the extent of the argument and discussions in the Joint Chiefs over whether or not we should have a B–70 program like the one proposed in the budget or like the one proposed by the Air Force?

General WHITE. I could not cite the number of times that it was discussed, Mr. Chairman, but it has been a subject, a perennial subject, in all JCS meetings where forces and new weapons and comparative values came up.

The B–70 was opposed by some and blessed by others, in varying degrees of enthusiasm and as to the extent of the program. The last consensus was taken by the Secretary of Defense in his final meeting with the Chiefs on this year's budget.

Mr. MAHON. What was the attitude of the Navy and the Army with respect to the Air Force conviction that we ought to proceed with a B–70 program to a fuller extent than as proposed in the budget?

General WHITE. I believe it would be better to ask them, Mr. Chairman.

Mr. MAHON. It might be, but what did they appear to say and what impression did you get? Were they with you or against you? That is my point.

General WHITE. Off the record.

(Statement off the record.)

Mr. MAHON. That is your memory of the situation?

General WHITE. It was an oral meeting. So far as I know, no records were taken. Whether the Secretary of Defense kept a record, I do not know.

Mr. MAHON. The issue was frankly discussed among you?

General WHITE. Yes, sir; both as to force levels and budget considerations.

Mr. MAHON. What about the B–58 issue? Was that discussed by the JCS?

General WHITE. The B–58, as I recall, in quantities roughly comparable to what we have, or what we had in the original budget, was not a matter of serious contention. I actually do not remember, I would have to refer to JCS documents. As I recall, the B–58 did not have great opposition except in philosophical differences that retaliatory forces are too large.

Mr. MAHON. It is argued that the B–58 is a very significant and important weapon for the early 1960's in view of the so-called ICBM gap. It would seem that this issue would have been threshed out fairly seriously at the top echelon of the JCS.

General WHITE. I do not recall any opposition to the B–58 program, other than I mentioned. We have had many of these discussions, many versions of force structures and budgets. My impression, is that there was no particular issue raised on B–58's, as such.

Mr. MAHON. This was more or less handled internally by the Air Force?

General WHITE. No, sir; the force structure and the budget was submitted to the Joint Chiefs of Staff.

Mr. MAHON. What were the recommendations of the Strategic Air Command on the B–58 and on the B–70?

General WHITE. The B–58, as I recall, was about the third priority weapon system in the Strategic Air Command submission, not including consideration of airborne alert requirements. The first was more ICBM's. The second, or perhaps the first, was B–52's, then the B–58, and then the B–70. The point being that the first three weapon systems are ones that are in being, and the B–70 was one for the future. General Power was particularly concerned to have more weapons as soon as possible. Of course, he has always stated that the thing that gives us the greatest plus in strategic capability is more jet KC–135 tankers.

Mr. MAHON. General Power gave high priority to additional B–52's despite the fact we have already financed—how many have we financed?

General WEBSTER. 704.

Mr. MAHON. Despite the fact that we have already financed 704, he put a high priority on additional B–52's, and you have in this budget how many?

General WHITE. Forty. We do not have as many as he asked for.

Mr. MAHON. How many did he ask for?

General WHITE. He asked to reach 20 wings as soon as possible. This program will complete the 14th wing.

Mr. MAHON. Do you know whether he placed additional B–52's ahead of B–58's?

General WHITE. I think he did. On the other hand, it was very difficult for him and very difficult for me to make such a decision. While I would like to have had him decide, he was unable to do so on a priority basis because the B–52 gives you a plus and the B–58 mixed with the B–52 gives you even an additional plus. He just wanted more of both.

Mr. MAHON. We will let him speak for himself later.

Where did the B–70 come in the SAC recommendation?

General WHITE. As I recall, it was the highest priority after weapon systems presently in existence.

Mr. MAHON. You mean after the B–52 and after the B–58?

General WHITE. And after the ICBM's. This is because he was thinking of forces that can be in operational units in the next 2 or 3 years. I would say the B–70 was his highest priority program for the future.

Mr. MAHON. I want to stay generally with the subject of the Joint Chiefs. We had a little diversion there. Did the Joint Chiefs discuss the number of forces, men in the services? Was there any special issue over that matter this year?

General WHITE. A good many discussions were had on that. Under the guidelines we had choices between more people and less hardware or more hardware and fewer people. Under that kind of a tough decision, it was the Air Force philosophy that we would do well to have fewer and better units, more advanced weapon systems and fewer men. We chose, under the circumstances, to cut people in order to have more modern weapons.

Mr. MAHON. I will not pursue that further. Here we have talked about the B–70, the B–58, and the B–52. The Joint Chiefs discussed this issue of whether we should have more B–52's when some members of the Joint Chiefs probably feel we have an overkill capability now, too much retaliatory power? Was the B–52 an issue of controversy?

General WHITE. I do not recall that the B–52 was a major issue, up to the number we had in our budget.

ICBM PROGRAM

Mr. MAHON. Let us move to what the Joint Chiefs of Staff thought about the so-called ICBM lag or missile gap. What was the attitude of the Joint Chiefs with respect to whether or not we should try to drive this ICBM program forward more rapidly?

General WHITE. I really think that is one for the Chairman or the Secretary of Defense. I am not very happy about going into the internal operations of the Joint Chiefs of Staff, Mr. Chairman.

Mr. MAHON. What I want to know is this. As I understand it, you argued for a bigger ICBM program than is contained in the budget; is that correct?

General WHITE. Bigger than the one contained in the 1960 budget; yes, sir.

Mr. MAHON. What did you argue for?

General WHITE. We asked for the program presently at hand, which is roughly a net increase of a little more than a third of the program we had last year. We are going, under this program, from the previously approved 20- to a 27-squadron ATLAS-TITAN mix.

Mr. MAHON. You have gotten generally what you personally thought you needed in an ICBM program; is that correct?

General WHITE. All things taken into consideration, yes. I must add a number of caveats to that. In the environment—I will have to come back to the Joint Chiefs of Staff—of Joint Chiefs of Staff opposition to even the lower number of ICBM's we had in the old program, and in view of the further stipulation in the budgetary process that any additional ATLAS or missile programs must come within the basic Air Force budget, it appeared that the 27 squadron program was the maximum that it made any sense to go for. As I said, however, we did succeed in increasing the program by seven squadrons over last year's program.

Mr. MAHON. Was that the Air Force basic program as presented to the Secretary of Defense?

General WHITE. Yes, on the basis that any increases in the big missiles must be within that basic program.

Mr. MAHON. I know what you are talking about there, but I am asking you: Is the ICBM program before this committee the same program as the one presented by the Air Force to the Secretary of Defense?

General WHITE. That is correct.

Secretary SHARP. I think it is. At one time it seems to me we were talking about 17 TITANS or, rather, 17 ATLAS and 11 TITANS, which would have been 28 squadrons, but mostly we have been talking about different mixes of the 27 squadrons. We got pretty much what we asked for.

General WHITE. The difference between 28 and 27 was not anything except an internal Air Force adjustment in order to get one additional hardened squadron earlier than we would have otherwise.

Mr. MAHON. General Friedman, would you comment?

General FRIEDMAN. I just want to comment that the amounts for ballistic missiles in the President's budget are slightly higher than they were in our initial submission to the Secretary of Defense, tied largely to the request, since approved, that we should add a 13th ATLAS squadron and harden the 8th squadron, rather than the 9th, as initially contemplated.

Mr. WHITTEN. Will the chairman yield?

Mr. MAHON. Mr. Whitten.

Mr. WHITTEN. General, we get a budget making allocations budgetwise to the various services. Then our committee brings each service in and develops what that service wanted separately, leading one who did not understand it to the belief that since somebody has failed to give us defense to the full desires of the three services that we do not have a balanced defense, considering the necessity for protecting the economy which must back up frontline military.

Knowing the system under which you operate, with a Secretary of Defense and a Commander in Chief who has to balance desire against our general economy's ability to support, am I not right that in your presentation before the Secretary of Defense in working out the overall budget, each service presses as hard as it can for that which it would like to have?

General WHITE. There is no question about it.

Mr. WHITTEN. The fact that you press means that in the eventual umpire's decision you want your desires to be as fully presented as the other services?

General WHITE. Yes.

Mr. WHITTEN. The fact that you do not come here with everything you asked for is no surprise to you?

General WHITE. No.

Mr. WHITTEN. In your presentation of it you were just trying to match pennies with the other two services so that your judgment of what is sound would be equally as well presented in this overall decision which you expect each and every year; is that correct, General?

General WHITE. I think that is absolutely right. I might say each Chief looks at the overall problem differently from the others.

Mr. MAHON. In the end, of course, you must have a compromise in all your budgets.

NIKE-ZEUS

I am trying to get the picture of this matter somewhat as to the attitude of the Joint Chiefs. You have told us of some of the issues that were before the Joint Chiefs. Was the question of the NIKE-ZEUS before the Joint Chiefs?

General WHITE. Yes.

Mr. MAHON. What is the general recommendation of the Joint Chiefs?

General WHITE. There was no unanimity on that point. I can speak for myself. I favored very much going ahead with the full R. & D. on the NIKE-ZEUS, but did not feel it was justified to go into production for operational use at this stage of the state of the art.

Mr. MAHON. I think that was probably the attitude of the Navy and probably the Army, which we have not had before us, wanted to go ahead on a construction basis.

General WHITE. Off the record.

(Statement off the record.)

POLARIS PROGRAM

Mr. MAHON. With respect to the POLARIS, was that an issue at all in your meetings, Joint Chiefs' deliberations?

General WHITE. The number of POLARIS that are in this budget, as I recall, was agreed by all concerned. I know I agreed with the number that are in this year's budget.

AIRCRAFT CARRIER

Mr. MAHON. One of the controversial issues in the present budget is the carrier, whether or not there should be a carrier at all, and if there is to be a carrier, whether it should be nuclear powered or conventional. What was and is the situation with respect to that?

General WHITE. Of course, the Navy was for it. As I recall, I was the only member of the Joint Chiefs of Staff who opposed it in our meetings with the Secretary of Defense. I opposed both the nuclear- and the conventional-powered carrier.

Mr. MAHON. I am not asking you for any argument you may have made with respect to that before any body, but I would like to ask you briefly: Why do you oppose a new carrier, an additional carrier?

General WHITE. Because of its relative cost. I will give a general statement. I would say its relative cost compared to its capabilities in the nuclear age is too great.

Mr. MAHON. Percentagewise, how much of the retaliatory power of the Department of Defense is in the various types of weapons? For example, in bombers and ICBM's and in the POLARIS system. Do you have any basis for calculation? It seems to me General Power has said that the Strategic Air Command has more than 90 percent of the retaliatory power of the country. I do not know if that is correct.

General WHITE. I am sure it is at least 90 percent. It is all a question of what you call retaliatory power and whether some of the tactical air forces are included. I know the Air Force contribution

is on the order of 90 to 95 percent of the retaliatory capability. I am thinking of the nuclear strategic retaliatory capability. I cannot give a percentage of what the carrier forces would contribute, but in that type of situation it is very, very small.

Mr. MAHON. I would not be asking you these questions if you were just simply Chief of Staff of the Air Force, but you belong to the Joint Chiefs, which is an overall planning-policy committee which under the law is supposed to make great contributions to our overall Defense policy through recommendations to the Secretary of Defense, and so forth.

I would like to pursue further why you would oppose the carrier in view of the fact that the present Navy carriers are getting older and older. You say that the cost of the carrier outweighs its value.

General WHITE. Yes.

Mr. MAHON. What other things?

General WHITE. I think in the nuclear age, particularly when you have air-to-surface missiles, that almost any surface vessel is doomed in future combat. I do not see any solution for it as we go on out. A new carrier will not come into the picture until 4 or 5 years from now, at the very earliest. I believe there are other things which, in my book, are of a much higher priority than an additional carrier because I think the real needs of this Nation are to keep up its retaliatory nuclear aerospace retaliatory capability. I feel the carrier contributes very, very little to that mission.

Mr. MAHON. Did you get into this picture in the Joint Chiefs?

General WHITE. We did, in the budget, in force structures, in the so-called joint strategic objectives plan, and as a group before the Secretary of Defense in the final budget go-over.

Mr. MAHON. Here is one other facet of the Defense problem with respect to the JCS. What happened, generally speaking, on the issue of air defense in the Joint Chiefs? We have spent a lot of money on air defense in previous years and there are projected plans which would cause a vast additional expenditure for air defense. This is a sensitive and important question. Did you wrestle with these big policy issues in the Joint Chiefs of Staff this year?

General WHITE. We are reviewing the master air defense plan which resulted from disagreement on the part of the Joint Chiefs of Staff last year. I can only say that my impression is that air defense is a subject which requires constant review. It is currently under review with the possibility of making some adjustments to the program which is now before you.

AIR DEFENSE

Mr. MAHON. Do you think we should give a lower priority than we are now giving to air defense?

General WHITE. You are talking about air defense against the air-breathing threat. I think it is just about the minimum today that it should be.

Mr. MAHON. We do not have the most ambitious air defense program that we might possibly have?

General WHITE. We certainly do not.

Mr. MAHON. You think it is a minimum?

General WHITE. I think it is a minimum.

Mr. MAHON. Do you believe the Soviet medium bombers would be capable of striking this country?

General WHITE. I feel certain that some would get through.

Mr. MAHON. You have told us that the U.S.S.R. airpower is the most dangerous weapon confronting us. Is that true as of January 1960?

General WHITE. In my opinion, it is.

Mr. MAHON. How long do you think it will be true?

General WHITE. You mean the manned aircraft?

Mr. MAHON. Yes.

General WHITE. Another 3 or 4 years. The lines as projected are beginning to cross. Their inventory indicates they will have a very potent bomber force for as long as their aircraft are capable of making the distance and of penetrating. We think they can do so for some years to come.

Mr. MAHON. I do not know whether this question can stay on the record or not, but I had the feeling that General Twining more or less played down the air threat—that was the impression his presentation left with me.

General WHITE. I believe you misunderstood the point General Power was making. I think he was talking just about the heavy bombers.

Mr. MAHON. Do you think we must very seriously consider both the medium- and the long-range?

General WHITE. I do, indeed.

Mr. MAHON. Will the BOMARC missile be of value in any war other than for defense against an all-out attack against the United States?

General WHITE. I do not get the implications of the question, sir.

Mr. MAHON. Will the BOMARC be important as a weapon in any type of war except a type of war involving a direct air-breathing attack on the United States?

General WHITE. No, sir; it is purely a fixed air defense weapon. However, it is an effective weapon against the air-breathing threat anywhere.

Mr. MAHON. Would it be better to put the same money in fighter planes that can be used in case of need in limited wars all over the world?

General WHITE. I do not think so, because I think we must maintain our air defense here.

CANCELLATION OF F–108 AIRCRAFT

Mr. MAHON. As Chief of Staff of the Air Force, why did you permit, General, the cancellation of the long-range interceptor plane, the F–108?

General WHITE. That was a combination of two factors; the major one, was budgetary. We simply could not carry anything like our proposed programs—the F–108, B–70, ICBMs, B–52, B–58, KC–135, and so on. Something had to give. It was quite apparent we would not be permitted to develop more than one mach 3 aircraft. I never spent more sleepless nights, talked to more people, worried more about a problem than when that one came to the critical point of: Which were we going to continue, the F–108 or the B–70?

As I described yesterday, we had the two major groups of the Air Force that are concerned with those things and they had opposite positions except they were unanimous on one thing—that we ought to have both. One body said that if you can only have one, take the F–108, and the other body said that if you can only have one, build the B–70. When that came to me, I decided, after much, much pain and worry, that the B–70 was the one to pursue.

Mr. MAHON. Is it correct to say that you and the Air Staff earnestly thought——

General WHITE. We should have both.

Mr. MAHON. You should have both?

General WHITE. That is correct, sir.

Mr. MAHON. When you were confronted with a dollar ceiling, you marked a black line across the F–108, even though we had spent some $160 million on it and appropriated for fiscal 1960, $166.4 million more?

General WHITE. Yes.

Secretary SHARP. In that consideration we should add the fact that there are substitutes for the F–108 although they may not be quite as good as the F–108.

General WHITE. There were two aspects, one budgetary. The other is the fact that there are substitutes that conceivably can do the job, or at least a certain percentage of the job of the F–108. That is still being studied.

Mr. MAHON. I believe you discussed that and the plane involved was what?

General WHITE. Perhaps you are thinking of the F–106—but there were, and are several planes which could be considered. The B–58 had been considered as a possible long-range interceptor and was rejected. There is currently a proposal for a much less expensive aircraft that will be less sophisticated but which can do a large percentage of the job of the F–108. Then there is the A3J, which possibly could be adapted to this role in some measure.

AIR DEFENSE

Mr. MAHON. When I asked you whether or not it might be better to put more money in the long-range fighter-interceptor aircraft and perhaps less in fixed weapons like the BOMARC which could not be moved in an emergency to limited war areas, I seem to have gotten a categorical answer from you that you thought we ought to go ahead with the BOMARC program. It seems to me there are two sides to this issue.

General WHITE. I think it was the way you framed the question, Mr. Chairman. I think to move any air defenses from this country that are concerned primarily, almost completely, with the protection of this country against air attack—it would be very wrong to move any of them out to fight a limited war because it is during a limited war that a general war becomes even more a threat.

Mr. MAHON. You have these aircraft in this country when you need them; you have them where you can deploy them overseas; they are so much more flexible and versatile than the fixed-type defense. I was asking you if we ought to accelerate the aircraft and decelerate the air defense missile. I do not know. I am just asking you.

General WHITE. Let us put it this way. Should we build the F–108 instead of BOMARC because you might be able to deploy the F–108 to a limited war situation?

Mr. MAHON. To some extent, but you would not necessarily need the F–108. You might have a lesser plane.

General WHITE. You would not do that for the very reason that, BOMARC being fixed, it is here to defend the United States and should not be redeployed. Even if you had fighters substituting for the BOMARC, I think you would not normally redeploy them in a limited war. There might be a valid argument to the effect that a long-range fighter-interceptor for air defense purposes would be better than BOMARC, but it does not follow that the argument for selecting the aircraft would be because you could deploy it in case of limited war.

ICBM GAP

Mr. MAHON. I would like to get into the issue of the so-called ICBM gap, which is one of the interesting and important and perfectly valid subjects of conversation and discussion in an election year or any year where the future of this country is involved, and honest people have differences of views on these questions and a lot of people do not know for sure what their view ought to be. We only have a relatively few strategic bases from which to launch a retaliatory attack; is that correct?

General WHITE. That is correct.

Mr. MAHON. We have relatively few SAC bases. The Soviets know we have a few missile bases under construction and will have more, but it is a very limited number of targets here involved in the retaliatory power of the United States. That is no secret. He who runs can read that.

It seems to me this would give you concern as you approach a time when our opponent is increasing his ICBM capabilities. We have to bear in mind, of course, we are increasing our own ICBM's.

As I look back over the last 2 or 3 years, I am inclined to ask you this question. Could we have prevented the so-called ICBM gap had we desired to do so and should we have tried to prevent it or, more particularly, should we now try to do more to constrict the so-called ICBM gap? I think you get the question.

General WHITE. That is a real good question, if I might say so. Should we have gone faster? I think that when—I am getting far out of my field—I think when you consider everything overall, to have done so would have meant making decisions 2 or 3 years ago to go faster. I do not believe we had enough confidence in missiles at that time to have justified such a decision.

I think we, with our manned bomber force today and the one we will have in the future, supplemented by the ICBM's we will have, are going to provide the kind of deterrent which will preserve this Nation and prevent war through the time when our less expensive and more sophisticated weapon systems—I am thinking primarily of the MINUTEMAN—will give us the option to go to very much greater numbers than we have now.

In the meantime we have large numbers of manned aircraft and a growing inventory of ICBM's, as well as a mix of forces all over the world, which really complicate the enemy's problem.

The key to much of this lies in the overall system. I think that is something that has been largely overlooked. If we get warning, we are in a very good position vis-a-vis the potential enemy now, even in this period of their having a relatively larger number of ICBM's than we have. We have the warning for the air-breathing threat, which really is the major threat now, and which will be for a couple of years. We will have the BMEWS or the ballistic missile early warning system coming in, in three increments, the first of which we expect to be operational this year. That system will cover a very large part of the approaches to this country and should give us warning against incoming ICBM's.

Mr. MAHON. A warning, but no defense.

General WHITE. A warning, but no defense. I will come to the defense. The next increment of that system will come in the year following. That will give us a minimum of 15 minutes' warning.

Until we have BMEWS, if the threat materializes, we have a device whereby we expect to be able to preserve sufficient of our retaliatory forces, no matter what the enemy does, to cause him such damage for sure that he will be deterred from launching an attack. That device is to place the B–52's in the Strategic Air Command on a continuous airborne alert. When we get the 15-minute alert for sure, then all of the B–47's that are presently on a 15-minute alert are also launchable. As we go along, we are increasing our missile inventory. The mix together gives the enemy such a problem that, in my opinion, he will be deterred.

Mr. MAHON. Are we building ICBM's on a one-shift basis, or otherwise?

General WHITE. They are on a one-shift basis.

(The following additional statement was submitted later:)

Production is on a two-shift basis plus any required overtime to maintain schedules.

Mr. GARLOCK. Some construction work is being run on a different schedule.

Mr. MAHON. We could build ICBM's faster and we could build ICBM bases faster. I assume you would agree.

General WHITE. That is so.

Mr. MAHON. That has been true for 2 or 3 years. Is it correct to say that the so-called ICBM gap—I am not saying deterrent gap—the ICBM gap has been more or less deliberate in view of the many circumstances in this defense picture?

General WHITE. I think that is correct, everything considered. This is the way it was decided to do the job. "Everything" covers many facets, some of which I outlined a few minutes ago.

Mr. MAHON. Prestigewise, this deliberate decision has led to a big national argument, as you know. In hindsight would it have been better if we had gone crashing through and been able to match missile for missile in the intercontinental missile field?

General WHITE. I do not believe that with our lead in really good manned aircraft that it need have been done. I do not regret that we have not done it. There is one factor that is worth looking at. It is the HOUND DOG on the B–52 which is in a sense a missile—it is not a ballistic missile but it is a missile with a very big warhead on it that can go quite a long distance.

Mr. MAHON. Do you think in view of all the facts available to you that we ought now to step up our ICBM program beyond that which is planned?

General WHITE. I would have to put it this way, sir. From all the factors available to me and after many hours of thinking about this problem, were I the chief of staff of the Red air force, I could not advise my government that it could prudently take the step to attack this Nation.

On the other hand, there is no question in my mind that if we had more strategic retaliatory forces—by that I include most particularly the intercontinental ballistic missile, but I do not entirely overlook more aircraft for this period—we would obviously have more insurance. That is about the best way I can put it, Mr. Chairman.

USE OF ADDITIONAL FUNDS BY THE AIR FORCE

Mr. MAHON. If you should be asked what you would do with a few more billion dollars—I am not advocating more billions and I am not seeking to put you in an incorrect position—if you did not have the budgetary ceiling, would you then think that we ought to proceed from this day forward to close this so-called gap more rapidly by accelerating these ICBM programs, ATLAS or TITAN, or otherwise?

General WHITE. You have hypothetically given me quite a few dollars.

Mr. MAHON. Yes.

General WHITE. With a few billion, I could think of a number of things that would improve our posture and thereby add to our insurance.

Mr. MAHON. I am speaking of the very highest priority after the B–70. I will not ask you to include the B–70. I assume that it is top priority perhaps.

General WHITE. I can only say under my personal philosophical approach to this problem which the Nation faces, as Chief of Staff of the Air Force, as the member of the Joint Chiefs of Staff that generally is forced to be the champion of the Strategic Air Command, of course, I would, if we had more money, like to see more ICBM's.

Mr. MAHON. Now?

General WHITE. Now. I would also like to see more B–58's. I would like to see a number of other things. I would like to see more money put on some of the space programs. Not having them, I am satisfied that the program we have will do.

Mr. MAHON. Would you under any circumstances argue to yourself perhaps that you do not want to accelerate the ATLAS and TITAN programs at this time but you would want to ride out this period, thinking you could do so safely, that what you would like to do if not accelerate the TITAN and the ATLAS, would be to move more rapidly with the MINUTEMAN, which you think is more in the general area of the right answer? I am making your own argument to some extent, but I want to get your feeling.

General WHITE. I am advised by experts that we cannot go any more rapidly toward the MINUTEMAN. The MINUTEMAN is in the R. & D. stage and we have all the funds we need to develop the MINUTEMAN. We could now set up further production facilities than we have. Even so, we have a considerable production facility at the moment.

SPEECH BY GEN. T. S. POWER, COMMANDER IN CHIEF, STRATEGIC AIR COMMAND

Mr. MAHON. Mr. Secretary, I was reading this morning a speech by General Power, head of the Strategic Air Command. In a speech of January 19 before the Economic Club of New York he said:

Nevertheless, we can certainly expect that the Soviet leadership would take full political advantage of any military superiority over the free world which it may be able to obtain in the future. If they could effectively threaten us from a position of such military superiority that we would feel unable to defend ourselves successfully against the weapons they command, our capability to resist Soviet advances by means of subversion and political blackmail would be greatly reduced, if not nullified.

Military superiority of this magnitude would be achieved through the accumulation of a sufficient stockpile of ballistic missiles to destroy our retaliatory forces before they could be launched. Surprisingly enough, this would not take very many missiles under present conditions.

He is saying here that it would not take many missiles under present conditions to destroy our retaliatory capability. Beginning to quote again:

Published statistics show that the total number of installations and facilities from which we can launch nuclear-armed aircraft or missiles at this moment is only about 100. All of these facilities present soft targets, that is, they could suffer crippling damage even in the event of a near miss.

According to released data on nuclear effects, it would take an average of three missiles, in their current state of development, to give an aggressor a mathematical probability of 95 percent that he can destroy one given soft target some 5,000 miles away. This means that, with only some 300 ballistic missiles, the Soviets could virtually wipe out our entire nuclear strike capability within a span of 30 minutes. To further heighten this threat, only about half of these missiles would have to be ICBM's. The rest could be the smaller IRBM's which are considerably less expensive and easier to produce.

That statement, Mr. Secretary and General White, is quite provocative, if not alarming. I would like to have your reactions.

(The following statement was submitted by General White.)

First I would like to give you my interpretation of what General Power was saying. As you point out, General Power made a general statement as to what the Soviets might be expected to do with any military superiority which they may be able to obtain in the future. General Power then made the hypothetical observation that if our nuclear strike forces were deployed at about 100 soft locations, as they are at this moment, virtually all of that strength could be disabled by as few as about 300 enemy missiles. However, he did not say that the Soviets have that many at this moment, or that when they do have 300 missiles that we would still be located at only 100 facilities, all soft.

He then went on to say that the Soviets could be expected to augment whatever quantities of missiles they may already possess; that we must be prepared for the possibility; and that they might accumulate enough to increase the danger of surprise attack before our planned warning systems are completed and proven. He did not suggest that they will indeed achieve this margin of risk. He raised the point to lend emphasis to the measures we are taking to prevent it. He listed a number of actions which we are aggressively pursuing to maintain our margin of deterrent superiority—such as improving our manned bomber capability, phasing air-to-surface missiles into the bomber force, developing MINUTEMAN ICBM's both in hardened and mobile configuration, and backing all of this up by developing an airborne alert potential in our heavy bomber force.

I agree with General Power's hypothetical example of what the enemy could do with as few as about 300 ballistic missiles—that is, have a high probability of destroying 100 sites if they were all soft. Further, I also agree with General Power that the actions which we are now taking, and plan to take in the future—

to build up our missile force and improve its survivability while at the same time retaining a significant ground and airborne alert bomber potential to improve our warning

and, to keep apace with the future military potentials of space

will all combine to form the kind of survivable military strength which the Soviets could not attack without receiving unacceptable destruction in return.

Secretary SHARP. Mr. Chairman, I am reasonably sure it is a factual statement. If the Soviets had 300 missiles and if we had no warning at such time as they do have the 300 missiles, and if we did not use our airborne alert system when they have these number of missiles, they could undoubtedly carry out the destruction of our retaliatory forces General Power mentions. But we have known this all along. If this situation should come about and we did not have these other defenses against it, we would be in serious trouble. However, nobody gives the Soviets credit for having that number of big missiles any time in the immediate future, certainly not before we will be prepared to get our airborne alert, and we are quite well prepared now on some of it, into the air. Furthermore, our ballistic missile early warning system will be coming into operation, as General White says, this year, which will also alleviate some of this problem.

In the meantime, we are building missile sites which add to the number of missiles they have to have, so the 300 increases every time we add a missile site.

Mr. MAHON. What is that?

Secretary SHARP. That number of 300 that General Power used, I am sure that is the correct number, but it will increase every time we establish a missile base. Then the Soviets will have to put three more missiles on that base, even if it is a soft base.

Mr. MAHON. You mean on that missile area?

Secretary SHARP. Yes. The first missile bases will be soft, and then they will require, according to General Power's rule, three more missiles. When we start putting our missiles in a hard configuration, and that starts with TITAN in May of 1961, I believe. The enemy will undoubtedly have to put in a good many more than three missiles to eliminate them. General Power said by firing three missiles to each soft site they could have a 90 percent probability of knocking it out, but in 1961 when we start having hardened TITAN sites they undoubtedly would have to apply a great many more missiles because they would have to make nearer hits. All of these factors we have been considering all along. This is not a new idea. It may be a new idea publicly stated, but it is not to us who worry about these things in the defense structure.

Mr. MAHON. I think that there might be some argument as to when we would really have a fully effective BMEWS early warning system. You can clarify that for the record if there is any doubt about it. I believe, General White, you have spoken somewhat about that heretofore?

General WHITE. Yes. There is a very important element of General Power's speech that I think ought to be brought up to make the record quite clear. He goes on, and what he is leading up to is the SAC capability for airborne alert. Perhaps it would be proper to read another paragraph in his speech which follows along.

Mr. MAHON. Yes. I wish that you would read it. We might put the whole speech in the record.

General WHITE. I would recommend it. I think it is one of the best speeches that I have read.

Mr. MAHON. Without objection we will put it in the record at this point.

(The statement referred to follows:)

ADDRESS BY GEN. THOMAS S. POWER, COMMANDER IN CHIEF, STRATEGIC AIR COMMAND, AT THE ECONOMIC CLUB OF NEW YORK, NEW YORK CITY, JANUARY 19, 1960

The American people today are faced with the most difficult and far-reaching decisions in the history of this Nation. Through their elected representatives they must decide what course to follow in their quest for peace and what tools to furnish to insure the successful pursuit of that course.

Similar decisions had to be made after World War II when the United States emerged as the most powerful nation on earth and was thrust into the role of guardian of the newly won peace. It was then that we evolved a policy unprecedented in the history of this country, namely, the policy of deterring aggression through the threat of massive retaliation. To support this policy, we created a military tool, equally unprecedented as to character and scope—the Strategic Air Command. This combination of political strength and military superiority undoubtedly was the major factor in preventing another world war to this date.

But Soviet Russia, which 10 years ago seemed as unlikely a challenger to our leadership as Communist China may seem today, almost overnight developed into a major threat, not only to our overall supremacy but to our very survival. For the Soviets had achieved the capability to undertake what neither Lenin nor Stalin ever dreamed would be possible—a devastating attack on the United States.

It is, therefore, well to ask ourselves three pertinent questions. First, is our national policy of deterrence still feasible and desirable? Second, if we decide that it is, can our present and projected military posture support that policy adequately? And, third, with continued advances in military technology, will we eventually reach a point where a policy of deterrence is no longer possible?

It is vital to the future security of this country that we find conclusive answers to these questions even though the many variables and unpredictable factors involved leave considerable room for speculation and individual preferences. This applies, in particular, to the problem of determining the most promising approach for preventing aggression.

We can start out from the premise that everyone is agreed on the urgent need of preserving the peace. But this is where the agreement ends, because people have widely differing ideas as to the kind of peace they would accept and the price they are prepared to pay for it. Some people may be willing to buy peace, however meaningless, at any price, even at the expense of their human rights and freedom. I take a different position from their defeatist attitude; I maintain that death is preferable to life under communism. Obviously, we both cannot be right, however, I am confident that the vast majority of our citizens shares my convictions.

As President Eisenhower said in his state of the Union message early this month: "Still another avenue may be found in the field of disarmament, in which the Soviets have professed a readiness to negotiate seriously. They have not, however, made clear the plans they may have, if any, for mutual inspection and verification—the essential condition for any extensive measure of disarmament."

In this connection, let me also quote a rather significant statement made at the Lenin School of Political Warfare in 1931—almost 30 years ago by Dimitry Z. Manuilsky who was a prominent member of the powerful central committee of the Communist Party and later head of the Ukrainian delegation to the United Nations. Here is what Comrade Manuilsky said as reported by a former student at that school:

"War to the hilt between communism and capitalism is inevitable. Today, of course, (that is, in 1931) we are not strong enough to attack. Our time will come in 20 or 30 years. To win, we shall need the element of surprise. The bourgeoisie will have to be put to sleep. So we shall begin by launching the most spectacular peace movement on record. There will be electrifying overtures and unheard of concessions. The capitalist countries, stupid and decadent, will rejoice to cooperate in their own destruction. They will leap at another chance to be friends. As soon as their guard is down, we shall smash them with our clenched fist." We cannot ignore the fact that utterances of this kind have been made by the Soviets over the past four decades.

Finally, we can endeavor to maintain an honorable peace through an overpowering posture of balanced military strength and through our collective security arrangements, as we have done since the end of World War II. I do not

claim that, in this or in any other manner, we can stay out of a war. But I am convinced that his is the most promising and, in the long run, least expensive way of averting nuclear war.

It is claimed that our policy of deterrence cannot cope with the growing threat of small wars so long as we devote most of our efforts and resources to the deterrence of total nuclear war. But, in my considered opinion, the principle of deterrence through military superiority is broad and flexible enough to permit its application to any kind of conflict, regardless of its place, scope, and nature.

Our overall deterrent posture is a composite of a number of elements which go to make up military superiority. These include our own forces as well as those of our allies with whom we have collective security arrangements. A fundamental element of that deterrent posture is our strategic retaliatory strike force.

That strike force is not the only factor which deters aggression, but without a fully effective retaliatory force capable of inflicting on an aggressor damage which he considers unacceptable, there is no meaningful deterrent. At this time, SAC, which is by far the principal element of the free world's strategic retaliatory capability, receives less than 20 percent of the U.S. defense dollar and still smaller fractions of other resources.

Since military superiority is accepted as the prerequisite for a successful policy of deterrence, the question arises whether and for how long we can maintain an adequate margin of overall superiority. I am confident that, as of the moment, this margin is still large enough to deter the Soviets from risking war with the United States, despite their spectacular technological advances.

Indications are that, if the Soviets decided to launch a surprise attack on this country today, they would have to rely mainly on their long-range bomber force. Evidently, this force has neither the size and quality nor the global support facilities and centralized organization which give SAC's forces their unmatched strike capability. Moreover, this country has an extensive air defense system against manned bombers which would provide sufficient warning of their approach to permit the launching of SAC's alert force before it could be attacked on the ground.

The Soviets are well aware of the fact that a sizable percentage of SAC's strike force is on an around-the-clock 15-minute alert and that even their most advanced defenses could not prevent that force from inflicting crippling damage on their military controls and installations.

Nevertheless, we can certainly expect that the Soviet leadership would take full political advantage of any military superiority over the free world which it may be able to obtain in the future. If they could effectively threaten us from a position of such military superiority that we would feel unable to defend ourselves successfully against the weapons they command, our capability to resist Soviet advances by means of subversion and political blackmail would be greatly reduced, if not nullified.

Military superiority of this magnitude would be achieved through the accumulation of a sufficient stockpile of ballistic missiles to destroy our retaliatory forces before they could be launched. Surprisingly enough, this would not take very many missiles under present conditions. Published statistics show that the total number of installations and facilities from which we can launch nuclear-armed aircraft or missiles at this moment is only about 100. All of these facilities present "soft targets," that is, they could suffer crippling damage even in the event of a near-miss.

According to released data on nuclear effects, it would take an average of three missiles, in their current state of development, to give an aggressor a mathematical probability of 95 percent that he can destroy one given soft target, some 5,000 miles away. This means that, with only some 300 ballistic missiles, the Soviets could virtually wipe out our entire nuclear strike capability within a span of 30 minutes. To further heighten this threat, only about half of these missiles would have to be ICBM's. The rest could be the smaller IRBM's which are considerably less expensive and easier to produce.

Because of their tremendous speed, averaging about 15,000 miles an hour, ballistic missiles offer unique advantages to an aggressor who plans a surprise attack. It stand to reason that this has spurred the Soviets' effort to augment whatever quantities they may already possess at the greatest possible rate. Khrushchev himself let it be known that Russia is now engaged in the "serial production" of these missiles and that one single factory is turning out some 250 missiles a year, presumably including ballistic missiles.

Therefore, we must anticipate that the Soviets may have accumulated a sufficient number of operational ICBM's and IRBM's for an all-out missile attack before we have in operation warning systems which could provide reliable and adequate warning of such an attack. We have such systems now under development, designed to give some 15 minutes warning which would suffice to get most or all of SAC's ground-alert forces airborne. But until our ballistic missile early warning system becomes fully operational SAC's capability to survive a missile attack with little or no warning will be the crux of the free world's deterrent posture.

There is increasing public awareness of the mounting problem of survivability of our strike capability in a nuclear surprise attack. It must be understood that our deterrent strength is not determined by the forces which we have in being before such an attack but only by those forces which we can be certain to have left after the attack. From a deterrent point of view, therefore, the decisive factor is whether we can keep the Soviets convinced that, even under the most unfavorable conditions, our surviving strike force will be adequate to retaliate both instantly and decisively to aggression.

Fortunately, the complex technological problem of insuring the survivability of SAC's alert forces in a missile attack can be solved, at least partially, through a basically simple military tactic, namely, by keeping the alert aircraft in the air instead of on the ground. This tactic has been tested thoroughly and found to be entirely feasible. With adequate and timely preparations for meeting added demands for support, SAC can maintain an airborne alert long and effective enough to bridge what could otherwise become the most dangerous gap in our military posture since Pearl Harbor.

In discussing the deterrent role of our strategic strike forces I have, so far, emphasized the manned bomber. I have done so because, for the present and some time to come, we must depend primarily on our manned weapon systems to carry out the strategic mission. But SAC is rapidly building up its missile capability and reached an historic milestone on the 9th of September last year when a SAC combat crew successfully fired its first operational ATLAS ICBM. As the President pointed out in his state of the Union message, this missile has proven equally successful in its last 15 test launches, with an accuracy of less than 2 miles.

I have little doubt that continued advances in missile design and techniques will further improve warhead yield, accuracy, and reliability and that, eventually, we will have missiles in sufficient quantity, quality, and variety to accomplish most of our strategic missions. In the meantime, however, we cannot afford to neglect, let alone shelve our existing and well-proven manned bombers because SAC must always maintain a sufficient inventory of operational and combat-ready weapon systems to insure effective coverage of its target system at any time.

As missiles are phased into SAC's inventory, they will replace some of the older bombers which are ready to be phased out. But I want to make it clear that this cannot be done at a ratio of 1 for 1 because, contrary to widespread belief, one missile is not equivalent to one bomber with respect to strike capability, as reflected in nuclear yield and accuracy.

While bomber accuracies are measured in feet, those of missiles are still measured in miles. Of course, missile accuracies will improve but, over distances of 5,000 miles and more, even dramatic improvements in guidance techniques cannot be expected to approach the standards possible with SAC's bombing systems and techniques. Lower accuracy can, to some extent, be offset by higher yield. Yet, the yield of a missile warhead, although far greater than that of the largest conventional bomb, is but a fraction of the nuclear payload of the bomber which, moreover, can carry a number of high-yield weapons to different targets.

An additional consideration that must be taken into account in comparing missile and bomber quantities is the fact that missiles are "one-shot" weapons while bombers can be "recycled" and used for as many missions as circumstances may require and permit. The point has been raised that manned bombers are so vulnerable to modern aerial defenses that only a relatively small number could be expected to penetrate to their targets and few if any of these bombers could be counted upon for a follow-on attack. It must be realized, however, that offensive techniques and tactics have profited from scientific advances as much as or, perhaps, even more than defensive techniques.

It is often taken for granted that today's aerial defenses, employing the latest antiaircraft missiles and guidance methods, would exact far higher losses than we suffered in our bombing operations during World War II. But if someone had tried, in the early days of that war, to predict the average attrition rate for tight formations of hundreds of bombers fighting their way through heavily concen-

trated flak and large numbers of fighters, he probably would have arrived at a very high estimate also. Yet, out of a total of about 530,000 heavy bomber sorties flown in World War II, only some 9,500 aircraft were lost to enemy action, for an average attrition rate of less than 1.8 percent.

I am not inferring that bomber attrition rates in a nuclear war would be anywhere that low. But neither do I believe that they would be anywhere as high as is sometimes claimed. In trying to predict bomber attrition rates, one of the most important contributing factors is frequently overlooked, namely, the unpredictable factor of tactics. I maintain that the commander and his tactics, more than anything else, determine the losses in any offensive action.

There are several other factors which should keep future attrition rates within acceptable limits despite continued improvements in antiaircraft defenses. As these defenses become more sophisticated, they must rely to an increasing degree on electronic systems which in turn, are susceptible to electronic countermeasures. Moreover, it should be borne in mind that attrition applies not only to the offensive but also to the defensive.

Throughout World War II, bombers generally disregarded the defenses because they were not considered worth attacking. However, if we should be forced into a nuclear war by an aggressor, the enemy's aerial defense system would become a priority target and would be attacked with the most effective countermeasure known today, namely, the hydrogen bomb. Each successfully dropped bomb would take out the defenses in a wide area and permit ever deeper penetration for successive bombers.

Penetration of enemy defenses will be further enhanced by the GAM–77 or HOUND DOG, a supersonic and very accurately guided air-to-ground missile with a nuclear warhead. The B–52G bomber will carry two of these missiles—one under each wing—in addition to its regular nuclear payload. Tests with the HOUND DOG have met all expectations. In fact, I had the pleasure of accepting the first production missile from the manufacture about a month ago.

The HOUND DOG will make it possible to attack the enemy's defenses from hundreds of miles away and thereby help the bomber to penetrate to its target. But this is only one of the advantages of the HOUND DOG missile. Its primary significance lies in the fact that it will vastly increase the utility and flexibility of the manned bomber and permit a variety of new tactics, such as attacks on additional targets in different areas during the same mission.

I consider the B–52 and HOUND DOG combination but the first step in the marriage of manned bomber and missile. The next step will be the use of the manned aircraft as an airborne and virtually invulnerable platform for air-launched ballistic missiles. It is, therefore, evident that SAC must continue not only to replenish its manned weapon systems but also to modernize them so as to keep pace with technological advances.

The addition of the HOUND DOG and, later perhaps, of air-launched ballistic missiles will greatly extend the useful life of the current B–52. But, eventually, it must be replaced by a more modern bomber, and I am hopeful that, by that time, we can put into operation the spectacular B–70 which is now under development.

Modernization of the bomber force is by no means a stopgap measure because, for the foreseeable future, there will always be need for manned weapon systems. This will be true, for instance, in missions which entail reconnaissance and on-the-spot decisions based on human judgment or for attacks on mobile and concentrated, well-protected targets. The missile, in turn, will ultimately be assigned to most other strategic missions, especially those requiring rapid action and invulnerability to aerial defenses. This is why SAC is planning for an aerospace force of bombers and missiles in which one will complement and supplement the other, thus exploiting the advantages of both.

The survivability of the missile poses a somewhat different problem from that of the bomber and must, therefore, be solved by different techniques. Since a missile cannot be recalled once it has been launched, it would be too risky to fire it until there is incontestable proof of aggression. Therefore, our ICBM's probably would have to "ride out" the initial attack. This problem is taken into account in our later missiles which will permit launching from silos deep in the ground, thus providing good protection or "hardening" against the effects of near-misses.

Hardening of missile sites is both practical and highly desirable as it aggravates an aggressor's problem of destroying all or most of our missiles before they can be launched against him. Compared to the previously mentioned average of only three missiles needed for a 95 percent probability of destroying one soft

missile site, the aggressor would have to launch a considerable number of missiles of more advanced design to obtain the same degree of probability that he can destroy one hardened site.

The aggressor's problem will be further compounded as increasing numbers of missiles are added to our operational inventory and placed in widely dispersed, hardened sites. The MINUTEMAN, a greatly simplified missile now being developed for SAC, will be particularly suitable for this purpose. Additionally, it is planned to mount a number of MINUTEMAN missiles on railroad cars and move them in a random pattern over the almost 100,000 miles of railroad trackage in this country which is suitable for this purpose.

Mobility is a most attractive defense tactic because the probability of destroying a mobile target with a long-range missile is extremely small. The advantages of mobility are fully exploited in SAC's airborne alert system and also underlie the basic concept of the POLARIS weapon system. Mobile MINUTEMAN missiles and bombers on air alert will have the added advantage of being beyond the reach of Soviet reconnaissance and countermeasures.

The concept of launching small medium-range ballistic missiles from a submerged submarine represents a most intriguing approach to the problem of survivability, despite the many unprecedented and still unresolved problems which it entails. We have great hopes for such a system but we also must remember that there are some inherent limitations as is true for any other type of weapon system. Also, it can be assumed that many if not most of the close to 500 submarines credited to the Soviets would be used to support a missile attack on the United States with simultaneous attacks on our nuclear fleet units on and under the seas. The POLARIS must be prepared to cope with this threat.

These limitations should not detract from the fact that the POLARIS concept holds considerable promise. I am confident that, once the POLARIS submarines have become operational, they will add importantly to our retaliatory capability, and I hope that their target systems and schedules will be integrated effectively into the Nation's overall strategic mission.

As this and our other programs for the future materialize, we will reach the point where no foreseeable magnitude and method of attack can destroy the effectiveness of our retaliatory capability. Missiles in hardened sites and on mobile launchers, bombers on alert and POLARIS submarines under the icecap would survive in sufficient quantities to strike effective blows at the aggressor from all sides. Conversely, however destructive our capacity for counterattack, there can be no doubt that, by that time, the Soviets will have achieved a similar degree of survivability for their follow-on strike forces.

This means that both sides will make the capability of inflicting tremendous damage on each other's civilian establishment and economy, but neither side will be able to prevent the other from striking back. We will then have arrived at a condition which is best described as "nuclear impasse" since that is as far as we can go in stabilizing the global balance of military power. It is important to understand that this condition will be much more stable than the one in which we find ourselves today and which is usually referred to as "nuclear stalemate."

The term "nuclear stalemate" has created much confusion because it infers that, in effect, the Soviets' and our nuclear capabilities cancel each other out and that, therefore, they would not dare attack us. But there can be no real stalemate as long as the Soviets are in a position to tip the scales in their favor merely by taking the initiative.

However, once we have reached the point where a surprise attack can no longer prevent or even minimize retaliation, the initiative would give a potential aggressor only a temporary and relatively limited military advantage which would gain him too little and cost him too much to make aggression worthwhile. Our future security demands that we reach that point as rapidly as possible, rather than stretch out defense programs designed to get us there before it might be too late.

This should not imply that we will have reached the ultimate in destructiveness of weapons and compression of time. It would be futile to speculate what miracles of science and what technological breakthroughs lie ahead and what they might do for the battles of tomorrow, ranging from the depths of the oceans to the far reaches of space. But there can be no doubt that we can maintain an effective deterrent only by making certain that no other country will ever reach the next higher technological plateau before we do.

As I indicated before, military strength is only one factor which, in combination with others, represents a nation's deterrent strength. There are, in particular, two other factors the Soviets would weigh. One factor in deterring or encouraging aggression may be the quality of our civil defense. Therefore, our civil defense

measures for protecting our population and expediting recovery after a nuclear attack represent a vital element in our deterrent posture and deserve the most urgent attention.

Another and, perhaps, still more important factor the Soviets would consider is the effect of the cold war on the determination of the American people to fight rather than submit to Communist dictate. The Soviets' propaganda and subversion, their threats and their pleas, their boasts and their offers are designed to make us abandon our policy of deterrence and ourselves destroy its very foundation—our military strength.

Indeed, military strength is not an end in itself, but it is an indispensable means in protecting our heritage until a truly lasting peace can be assured. Our goal is a world in which all peoples will have the opportunity to choose for themselves the political and economic conditions under which they will live. I know that the American people have and always will have the determination to attain this goal and that they will back up that determination with all the strength they can muster.

General WHITE. At the bottom of page 7 General Power says:

Fortunately, the complex technological problem of insuring the survivability of SAC's alert forces is in a missile attack and can be solved, at least partially, through a basically simple military tactic; namely, by keeping the alert aircraft in the air instead of on the ground. This tactic has been tested thoroughly and found to be entirely feasible. With adequate and timely preparations for meeting added demands for support, SAC can maintain an airborne alert long and effective enough to bridge what could otherwise become the most dangerous gap in our military posture since Pearl Harbor.

We do have in this budget provision for an airborne alert capability.

Mr. MAHON. Is a statement like this, which is a basic policy statement in some respects, cleared by the highest authorities in the Pentagon before it is released? He did not necessarily speak the views of the Department of Defense?

General WHITE. No.

Mr. MAHON. I know he does not always do that. But this statement was presented to the Department of Defense, I assume, before it was made and it was cleared; is that correct?

General WHITE. That is the normal procedure. I happen to know this one was.

Mr. MAHON. Was there a long delay in the clearing of this one, or any special difficulty?

General WHITE. General Power usually has trouble with his speeches, and I think he had trouble with this one.

Mr. MAHON. How long did it take the Department of Defense to clear it?

General WHITE. I could not say.

Mr. MAHON. There is an indication in the press that it took quite some time.

General WHITE. I do not know, but will insert it in the record at this point.

(The following information was furnished:)

1. Following is a complete chronology of the review of General Power's speech which he gave on January 19, 1960.

(*a*) Copies of the speech were received from Headquarters, Strategic Air Command, with an accompanying letter from Colonel Foster (SAC information officer) to Brigadier General LeBailly, on December 15, 1959.

(*b*) All copies indicated on the first page that the speech was to be given on January 9, 1960, rather than January 19, 1960. Later determined to be a typographical error.

(*c*) The speech was immediately reviewed by an officer to determine what Air Force agencies should review and coordinate on it.

(*d*) One copy was forwarded to Brigadier General LeBailly, for information.

(e) One copy was forwarded to General Parrish for policy review.

(f) On December 21, 1959, an electric message was received from Headquarters, SAC, requesting a correction be made in paragraph 2, page 7, of the speech. Correction was made on all copies.

(g) Copy returned from General Parrish's office on December 23, 1959, indicating that with certain changes there was no objection from a policy point of view.

(h) On December 24, 1959, three copies of the speech, with changes, were forwarded to the Office of Security Review, Assistant Secretary of Defense (Public Affairs) for clearance.

(i) The Air Force was later informed copies of the speech were forwarded to the Department of State and the Joint Chiefs of Staff for coordination.

(j) During week January 4, 1960, Colonel Foster, SAC information officer, was in the Pentagon. He was informed of Air Force changes in General Power's speech and he discussed them with Air Force personnel who had reviewed speech. He then conferred with the Office of Security Review, OASD (public affairs) about the speech. On January 8, 1960, the Office of Security Review gave Colonel Foster a cleared, but amended, copy of the speech. A copy was returned to Air Force on January 13, 1960, by the Office of Security Review. All changes, Air Force, Joint Chiefs of Staff, Office of Security Review, and State Department were included in this copy.

2. In summary, the speech arrived in Headquarters, Air Force, on December 15, 1959, was forwarded to the Office of Security Review on December 24, and was given to SAC on January 8, 10 days before its scheduled delivery date The speech was reviewed and cleared in the Pentagon and by the Department of State in a total of 14 working days.

Mr. FORD. I think some of the questions and the answers to those questions have been very helpful for the record. It seems to me we should make a maximum effort to have both the questions and the answers that have been given today included in the printed record. We have had some experiences in the past when questions and answers have been deleted for alleged security reasons. I believe nothing that has been said here today—and perhaps nothing is not the right word—but very little of what has been said here today, need be stricken from the printed record. I sincerely hope that both the questions and the answers be included in the printed testimony that we subsequently release for the public.

Mr. LAIRD. General White's answers, getting into all the ramifications of our defense posture, are quite important and they should be on the record, particularly when General Power's statement is included. My experience is—and it was my experience insofar as Secretary Gates' testimony was concerned—I do not always recognize these exchanges in the published record. That is why we get into some of the difficulties we do. Our subcommittee is in the position of having to take responsibility for appropriations that we have approved, and we are somewhat "out in left field" after the record is sanitized. I think that this has been a good discussion, but I am afraid that we will not recognize it when we get the record back.

Mr. MAHON. I wish that you would give particular attention to these admonitions and try to have this record as clear and ample as you possibly can. I do not want my questions to indicate that I am plugging for or against increases in defense spending. We made some reductions in the defense budget last year. I am just trying to get at the facts. A lot of people are interested in these facts, and I believe it is the duty of the committee to try to get the facts for ourselves and Congress and let the people do what they want to with the facts; but we have to try to get them.

Mr. WHITTEN. I differ sometimes about our objective here. I think the present state of the record leaves a big buildup for more

money. I am not trying to take issue with my chairman, but we have been asked not to duplicate questions. I think that the present state of the record leaves a buildup for exceeding the budget. I think further questions of General White would clear it up and not leave it in that condition. I am asking, should we try to interrupt the chairman, or should we reserve the privilege of duplicating questions?

Mr. MAHON. As chairman of the subcommittee I try to develop the whole picture as nearly as I can because someone has to do it.

This morning I have sought not to yield any more than absolutely necessary because I want to conclude with the witness in order that others might have an opportunity. Other members of the committee have views and questions and ideas which are just as worthy of consideration as any I might have.

General WHITE. Might I make an observation on this particular issue? I think the matter of the record is not one that the Air Force is primarily concerned with. I would like to point out that one of the pleasures, if I may put it that way, of appearing before this committee, or any congressional committee in an executive session, is that one can be very frank and open without worrying about security and the rest of those things. If you know that there is going to be some special attention to releasing parts of it which may cause difficulty, that tends to act as an inhibition. I am not saying that there is anything I feel should not be published because it is not truthful, or not my conviction, but there is a great advantage in the witness knowing what he says is not going to be published without his superiors clearing it.

Mr. MAHON. Let us pay special attention to this particular record and see that we do not delete things that are particularly significant, and I will ask the staff to call attention to the members of the committee any material changes. You may correct your language, and if you want to add an insert and label it as an insert, of course it can very well be done.

RETALIATORY POWER

Mr. SHEPPARD. There is one thing that has disturbed me considerably, and it has been going on for quite a while. For many years around here we have referred to our military strength as military power. Now, out of the mind of man there has come a coined and rather liberally applied phrase—retaliatory power, which is a downgrading of our ability. What is the military necessity for the application of "retaliatory" in the continuity that we have? What is the application of that particular word? Why is so much emphasis given to it? Are we not discussing the actual military power of our Nation, whether it be brushfire or some other power? What is the problem here?

General WHITE. It stems from the national policy that certainly this Nation will not be the first to be an aggressor, which, translated the other way, means that if we are hit, we retaliate.

Mr. SHEPPARD. In other words, by the application of that word and your definition of it, it is internationally, psychologically, and otherwise assumed we will never become offensive about anything?

Secretary SHARP. I certainly think it is national policy now to say that we are not going to be an aggressor and try to attack the other man first. I do not know whether it means that we will always be

that way. I think this term "retaliatory" has come to describe the use of military power. I think we still talk about military power, but the use of it as a deterrent, a retaliatory power, is the current use I think we expect to make of our major elements of military power. I think it is sort of a description of what we are planning to do with military power. It does not mean the same thing.

Mr. SHEPPARD. You have given me an answer. Personally, I am not very happy with it. I have very great respect for a former Republican President who had a good phrase, "Tread carefully, but carry a big stick."

This is a rather stupid philosophy, psychologically and otherwise, and I do not like it, but we have it and I guess I have to live with it.

Mr. SIKES. I would like to add to what you have said, Mr. Sheppard. This Congressman also feels it is a serious mistake to publicly declare periodically that we are never going to strike the first blow; that we are always going to wait for an opponent to seek to destroy us before we take steps in our own behalf. I think that is an utterly silly concept, I do not think it builds up confidence on the part of our allies. I think it breeds contempt on the part of those who would destroy us. I think that we should let our opponents guess a little about our intentions just as they let us guess about theirs.

Mr. WHITTEN. We announced to the world that we will never strike the first lick, and that leaves Russia without any fear we will do anything unless she does something first. If she can lead us to forget our general economy and get where we do not give two hoots about whether we can continue this thing for 25 years by letting a few gaps in this Iron Curtain lead us into spending ourselves blind without regard to the long range, she can destroy us and never fire a gun.

Now, as illustrative of what I am talking about, on May Day 2 or 3 years ago when our people saw two or three of their big bombers immediately some of our Senators started saying—we are letting our country go to pot. We saw 3; they must have 11, and therefore they must have a hundred under construction. We went all out. Secretary Wilson came down here and got money to build our big bombers and in a year we found out there was nothing to it. It all goes back to what my colleague from Florida has pointed out. If you tell the other fellow you will never hit first and then we lose sight of maintaining our long-range capability of staying strong so we can, they win without a struggle.

NEED FOR EARLY WARNING SYSTEM

Mr. SHEPPARD. I recently took a tour of military posts, and the accumulation of information is very clearly indicating that in our communication lines we have a series of bad gaps. I use the words "bad gaps" because of the testimony that I received.

What is happening in that field, and what is creating the slowdown? I understand that the major portion of our military functions would have to react from the early warning operations. What is the story there? Do you care to express it?

Secretary SHARP. I do not know the exact gaps that you refer to. Are these gaps in the strategic communications?

Mr. SHEPPARD. Both in the SAGE and the DEW line operations, and the bringing into a centralized area complete information for an early warning system to operate.

Secretary SHARP. Perhaps General White knows of these gaps. I am not familiar with them. I do know that the Air Defense Command and the Strategic Air Command want improvements in their communications systems and those are being studied. I did not realize that there were any major gaps that actually make them unresponsive to the information that we get.

General WHITE. I know of no major deficiencies. Do you have any specifics?

Mr. SHEPPARD. Of course, the specific locations have been indicated. I do not have a copy of the report with me at the moment. We have airplanes in flight and we are spending a considerable amount of money to keep them in flight. I just recently watched a very interesting demonstration of that ability, but if you are going to have gaps that are going to permit encroachments and you evaluate that against your 15-minute time limit, it seems to me that something ought to be done about the gaps, if they are prevalent. I am going to leave it up to you gentlemen to determine that.

General WHITE. I now identify what you are talking about. There is no question improvements can and should be made in the communications field of getting rapid transmission of messages. That is a perennial subject in the communications field. I think that we have made great improvement, but there must be better communications than we have now. There are a number of improvements in the mill at the moment.

Mr. SHEPPARD. Do you know whether or not those improvements you refer to are presently presented in this budget for correction purposes?

General WHITE. Not everything that we have asked for; not everything every commander has asked for, but there is a considerable amount.

CHANGE ORDERS TO CONTRACTS

Mr. SHEPPARD. I ran into a lot of difficulty that I think can be easily corrected in the field of construction where because perhaps of an inability on the part of your A. & E. people to properly evaluate and properly design at the moment change orders are prevalent. That is outstanding in the field of research and development where funds are being utilized for construction purposes through prime contractors.

I am wondering why we cannot simplify that to some degree. When change orders are necessary, instead of having them transmitted verbally, have them sent by wire or some definitive way so that when you are ready for your final settlement you do not have to have an extension of 6 months and a controversy over paving your bills and in turn getting what you should be getting for the dollars expended? There is a hiatus there beyond any question of doubt. Why can it not be corrected?

Secretary SHARP. I might refer that question to Mr. Garlock and Dr. Charyk. They are in the funding and the research and development area.

Mr. GARLOCK. I assume that you are talking about the research and development construction financed from the Research and Development appropriation?

Mr. SHEPPARD. In one phase, yes.

Mr. GARLOCK. In the missile field we have covered that with your group and we are pushing as rapidly as possible to get definitive drawing. We are also trying to simplify the construction as much as possible to cut down on the costs of the construction, modification, and rebuilding that are necessary for straight research and development programs, whether in public works, or whether industrially funded. I have always been under the impression they are learning as they build and waiting until everything is in a definitive stage. I am aware of the fact that this answer is probably overworked

Mr. SHEPPARD. I do not think that you are reaching the issue. It is probably due to improper phrasing. I know in the missiles field you have tremendous transitions. I understand that. But finally someone somewhere says to your field operator, "Here is your authority to change the operation." My whole question is based upon one fact, why do we have to transact so much of that business verbally, which leaves a hiatus to the tune of many millions of dollars? Why cannot it be translated out so when the time comes for settlement you will have a composition of facts, and that will be it? We could get away from a lot of wasted time and effort, and I think that your legal department would justify my statement. We have run into it time after time where millions of dollars are involved, and all based upon one premise—nobody has issued an order. It is not a part of construction; it is not a part of the operation. I know that you gentlemen frequently find yourselves in a position where something has to be done now. You cannot waste time, but it does not take too long to dictate a wire, maybe 10 or 15 minutes. In that way your authorization becomes a continuity and it becomes a component part of your settlement program and will avoid additional cost.

Mr. GARLOCK. I will have to agree with your premise; this ought to be cut out. I will look into it.

Mr. SHEPPARD. I am merely calling it to your attention because we are all interested jointly. I think, if you will take a look at that, we may be able to save ourselves a lot of headaches, proportionately speaking.

Secretary SHARP. We appreciate that suggestion, Mr. Sheppard.

SEARCH AND RESCUE OPERATIONS

Mr. SHEPPARD. I wonder if there is anyone here that can give me some general information on our planes that for many obvious reasons crack up. We send out a search crowd to try to locate them. I can only assume, without having progression of definite cost figures, that when that occurs you really have to spend a considerable amount of money, generally speaking, to locate the plane. Publicity on that issue would indicate that that is so. The planes that you are flying carry the most modern military concepts, and it occurs to me that the more rapidly you can locate a plane in difficulty the better off you are. Is that a proper assumption, or an improper one on my part?

General WHITE. For many reasons we must know about a missing plane as soon as we can and do something about it. Not only is the material in jeopardy, but the people themselves, and the fact that an airplane is missing raises all sorts of questions. We do undoubtedly spend considerable funds in that respect. I think we should.

Mr. SHEPPARD. From your statement I get the feeling that if you came into possession of a reasonable and inexpensive operation that would definitize the location of a grounded plane you would rather greet that with open arms, comparatively speaking, is that correct?

General WHITE. An improved system for locating a plane down somewhere?

Mr. SHEPPARD. Yes.

General WHITE. Yes, indeed, sir.

Mr. SHEPPARD. If you could do it on the basis of 15 to 20 minutes, with a degree of certainty, you would be really susceptible to that type of operation?

General WHITE. Yes.

Mr. SHEPPARD. We will bring that up later.

B–70 PROGRAM

If you were given a choice of funds for the procurement of a B–58 and an expedited B–70 program, what would be the choice of SAC, if they happened to have the choice available?

General WHITE. Are you speaking of the current B–58?

Mr. SHEPPARD. Yes.

General WHITE. I think SAC would say they would want both, I can promise you that.

Mr. SHEPPARD. Let us leave out SAC. How about your position of responsibility?

General WHITE. As of this fiscal year I would prefer—as I said earlier, from the relative confines of my job, I would prefer to put the money into the B–70.

Mr. SHEPPARD. Do you think that SAC concurs in that conclusion?

General WHITE. I believe they would.

Mr. SHEPPARD. They would? or do?

General WHITE. I have never asked them just that question just that way.

Mr. SHEPPARD. Perhaps we can develop that further when we come to procurement. I have no further questions at this time.

Mr. MAHON. Mr. Sikes.

ICBM PROGRAM

Mr. SIKES. We are impressed with the frankness with which you have responded to the questions this committee has asked you, and I want to commend you both for the ability with which you have answered those questions.

Now, let me ask you this: Do we now have a 7,760-mile missile?

General WHITE. I would prefer that a technical expert answer that because there are technical variations of a complex nature involved in a reply to that question.

Dr. CHARYK. I might make a couple of comments.

In the first place, the range that a missile can have is obviously a function of the warhead it carries. You will recall, for example, we actually put an ATLAS missile into orbit which required a velocity attainment considerably in excess——

Mr. SIKES. Let me clarify the question for you. I know what you are going to tell me. I do not think we need go into detail.

I am asking specifically, Do we have a missile which will do what the Russian's 7,760-mile missile did last week?

Dr. CHARYK. There is little doubt that we have, and we have demonstrated the kind of accuracies that have been advertised.

Mr. SIKES. Do we, or do we not, have a 7,760-mile missile which will do what the Russian missile did last week?

Dr. CHARYK. My problem is I do not know what the Russian missile did do last week other than being advertised as impacting within 1¼ miles of a designated target.

Mr. SIKES. Do we have a missile that will do that?

General WHITE. I think it is fair to say that we can fire a warhead 7,760 miles.

Mr. SIKES. Have we done it?

General WHITE. We have not.

Mr. SIKES. Why not?

General WHITE. One reason is that to do it on our Atlantic range would require going across Africa. We have looked into it, sir.

Mr. SIKES. Are you convinced, if the firing range were available, we could fire a missile armed with a warhead a distance of 7,760 miles?

Dr. CHARYK. I have no doubt we could do this if we wanted to.

Mr. SIKES. Why have we not done it in the Pacific where there is ample range?

Secretary SHARP. I think the main reason for not doing it anywhere is that we have not put much priority on this—seeing how far we can shoot.

Mr. SIKES. Is it your opinion, Mr. Secretary, that the additional 1,000 or 2,000 miles of range which the Russians have demonstrated over what we have done is not of itself particularly important?

Secretary SHARP. That would be my impression. We have not designed our system with the requirement to go that far, and we think that we can do all we want to with what we have.

Mr. SIKES. Do we have all the capability in our current missile, or missiles under development, that we desire?

Secretary SHARP. Yes; I think we do.

Mr. SIKES. You do not consider it a shortcoming that we are not building 7,760-mile ranges into our missiles?

General WHITE. As a weapon, no, sir.

Mr. SIKES. Why would the Russians build that additional range into their missiles?

Secretary SHARP. I think it is automatically built in there by the power of their booster. We know that they have a more powerful booster than we. Probably the reason they originally set out to do it—though this is guesswork on my part—is they thought they would have to carry a much larger warhead. They did not think that they would be able to make small high-yield warheads.

Mr. SIKES. Are you telling me that the significance in the fact that we are not building a 7,760-mile missile is not lacking of capability on our part but it is the fact that we do not need it?

Secretary SHARP. That is essentially what I am telling you, although we have missiles coming along later that will have greater range than our present missiles. The TITAN missile will have greater range. What we needed when we started out originally with the ATLAS missile was a 6,300-mile range.

General WHITE. Statute miles.

Secretary Sharp. Statute miles. That was the requirement and that is what we have built to. It has growth capabilities and will grow, but if we meet that requirement we are adequate to take care of our military requirements.

Mr. SIKES. That is what I want to learn.

B–70 PROGRAM

In the morning press there appeared this statement by Mr. Chalmers M. Roberts:

> The United States has shelved its plans for production of a supersonic bomber the B–70, but the Soviet Union is building its equivalent as a commercial transport.

Is that possible?

General WHITE. I think that is quite possible.

Mr. SIKES. Do we have any intelligence that such is taking place in Russia?

General WHITE. We have some intelligence to the effect that they are building a mach 2 commercial transport, which would not be the the same as the B–70 but which would be supersonic. The B–70 is mach 3.

Mr. SIKES. Does that give the Russians a particular advantage in the air over us?

General WHITE. I would say if it is mach 2 all the way, and it is stressed to take concentrated loads such as a bomb, such a transport would be the equivalent of a bomber—so much for the military aspect of it. I am sure that an all-the-way mach 2 civil transport will give them quite a leg up in the international competition for airline traffic.

Mr. SIKES. What about its military capability? Would this add significantly to their military capability and add significantly to our defense problems?

General WHITE. A mach 2 bomber would, sir.

Mr. SIKES. Would you consider this development to be an interim step between what they now have and the equivalent of a B–70, rather than the equivalent of a B–70 itself?

General WHITE. Very decidedly a relatively simple interim step.

Mr. SIKES. As I interpret your previous testimony, going to mach 2 is not of itself a major problem, but it demonstrates the approximate limit in capability of the present design techniques?

General WHITE. It is approaching that limit.

Mr. SIKES. To go to a B–70 requires something entirely different, a different state of the art and a different design. Therefore, the article I quoted might be misleading in that this mach 2 supersonic bomber which, as described, would not be the equivalent of a B–70?

General WHITE. I agree with that. I get some satisfaction out of that intelligence because I think if their aeronautical state of the art permitted them to be going to a mach 3 transport, or a mach 3 bomber, they would do it. I feel at least this single shred of evidence shows that we have the capability of maintaining our very significant lead in aeronautical science.

Mr. SIKES. Are you convinced from the intelligence we do have on this subject they are not capable of converting their present design of aircraft into the equivalent of a B–70?

General WHITE. Well, not the equivalent of a B–70, I would think, but rather the equivalent of a mach 2 bomber, if they are building a commercial version.

Mr. SIKES. I am trying to differentiate whether they can build on present aircraft design the equivalent of a B–70?

General WHITE. I certainly do not think so, but I think the scientists had better answer that one.

Dr. CHARYK. I would comment only upon the design capability. I think our evidence is such that the development of the aeronautical sciences in the Soviet Union would permit them to design such an aircraft. Whether they could actually fabricate such an aircraft, using the advanced techniques that are required, is another question. On that point I am not particularly knowledgeable.

Mr. SIKES. Is it your belief that they cannot design the equivalent of a B–70 on present airframes and present type of aircraft?

Dr. CHARYK. No. It is my opinion they could design such an aircraft, but they could not modify an existing aircraft to achieve this type of performance.

Mr. SIKES. That is what I want to bring out. They can design, but they cannot convert?

Dr. CHARYK. That is correct.

General WHITE. I would like to make an observation on that. If we ever reach the point, which I would deplore, where we feel manned bombers are no longer a threat, and we do not have to have a defense against them, I would point out that at that time every civil airplane becomes the equivalent of a bomber with some capability to reap serious destruction.

Mr. MINSHALL. Mr. Sikes, I would like to suggest that it might be a good idea to put the entire article in the record and let the Air Force comment at their leisure.

Mr. SIKES. I think that that is a good suggestion. I submit the article for the record and suggest that you comment in more detail after you have had a chance to read it, General White and Mr. Secretary.

(The article referred to follows:)

QUICKLY ADAPTABLE TO MILITARY USE: REDS BUILD TRANSPORT PLANE SIMILAR TO SHELVED U.S. B–70

(By Chalmers M. Roberts, staff reporter)

The United States has shelved its plans for production of a supersonic bomber, the B–70, but the Soviet Union is building its equivalent as a commercial transport.

In part, the reason is that in the Soviet Union there is centralized control of all aircraft manufacture and that the Russian commercial airline, Aeroflot, is run by former Red air force officers.

In a January 15 speech to the Supreme Soviet in Moscow, Andrei N. Tupolev, father of the many military and civilian aircraft which bear the letters TU along with numbers, indicated that the same "workers, engineers and designers" under his control are employed for both types. He also indicated a new supersonic transport is in the works, as already was known.

Soviet Premier Nikita S. Khrushchev had said a day earlier that Russia will stop bomber production. He added, however, that "we shall develop transport aviation, and some of the airmen will find they can use their knowledge and experience in serving in their own profession."

U.S. PLANS SHELVED

By contrast, in the United States the B–70 has been shelved in favor of missile systems. As of now there is no plan for commercial building of a supersonic transport although there has been discussion of the idea in the industry.

Military planes and transports in the jet age have identical airframes. Missiles are launched from under the wings; World War II style bomb bays are out of date. Hence the interchangeability of supersonic transports and bombers.

In the Soviet Union, Aeroflot has a basic operations unit which is the same as Red air force bomber regiments, experts here say. A much quicker switch from civilian to military use of jet transports would be possible, these experts say, than would be the case in the United States with the division of authority and different method of operation.

NATO GIVES CODE NAME

The Soviet supersonic transport already has been given a code name by the North Atlantic Treaty Organization as the latest in the Red air force's bomber series. It is known as *Bounder* and quite a lot of its characteristics are known. Some officials believe it has been flight tested in prototype form. According to one report, at least six different prototypes have been produced.

The close relationship between Soviet military and civilian aircraft has caused some alarm in Congress. Senators Stuart Symington (Democrat, Missouri) and A. S. Mike Monroney (Democrat, Oklahoma) on January 11 introduced a bill to provide for Government-guaranteed loans to air carriers for new planes, including development of a supersonic transport.

The bill would require that before any such financial aid was given by the Government the Secretary of Defense would have to certify that its design and performance characteristics would "satisfy the criteria of suitability for military use established by him." No action has yet been taken on this proposal.

(The comment requested follows:)

The Air Force does not have intelligence that confirms that the U.S.S.R. is building a supersonic transport aircraft which in performance and size is the equivalent of the B–70. However, the U.S.S.R. does have designers of proven ability; they have the technical knowledge required; and they also have the necessary production facilities. There is no question of their capability to produce such an aircraft.

A Soviet four-engine jet aircraft, probably configured for supersonic flight and in the 300,000-pound class, has been seen. This aircraft is estimated to be a bomber prototype, however, and is referred to as *Bounder*.

The U.S.S.R. is also working on a transport aircraft that could operate at supersonic speeds, but this aircraft appears to be smaller than a B–70 type. Such an aircraft will greatly augment the capabilities of their air transport organization, Aeroflot, which can be quickly converted to an adjunct of the military air forces. The worldwide gain in prestige accruing to the Soviet Union from the early introduction of a supersonic transport comparable in size to the B–70 would be invaluable to a nation involved in the airpower race.

A supersonic transport could be designed so that it could carry air-to-surface missiles under its wings. However, any such transport plane would require adaptability to such items as special bombing and navigation equipment and perhaps pylons for missile attachment. Such adaptability should be detectable.

Aeroflot, the Soviet commercial airline, is organized into regional or geographic groupings for administrative purposes similar to the Military Air Transport Service in the United States. Also, almost all administrative, as well as operating personnel of Aeroflot, are known to be either reserve Soviet military personnel or officers on detached service from the Soviet Air Force.

INCREASE IN DEFENSE POSTURE

Mr. SIKES. Now, in your statement, Mr. Secretary, you said:

I believe too you will find general agreement this budget provides for a substantial increase in the total free world defense posture when considered in conjunction with the significant contributions of our Army, Navy, Marine Corps, and other allies.

Were you contemplating that substantial increase in defense posture in the fiscal year 1961, or in a later year as a result of the fiscal year 1961 budget?

Secretary SHARP. I am sure that a great deal of it would come to pass in a later year, because there is certainly a lag between the time we apply funds and the time we get the benefit of them. That is only true in some cases, however. In the research and development field, for instance, we actually get the benefit of a good proportion of the funds right away.

Mr. SIKES. In what areas in particular do you consider that the Air Force will provide a substantial increase in the defense posture?

Secretary SHARP. Well, we have provision for more ballistic missiles, for instance.

Mr. SIKES. Which would come into inventory later than 1961?

Secretary SHARP. They will come in later than 1961. We have provision for the MINUTEMAN which will come in quite a lot later.

Mr. SIKES. You are looking somewhat into the future insofar as the greater part of the increase in the defense posture is concerned, are you not?

Secretary SHARP. Yes; most of the increase we will achieve in the fiscal year 1961 is the result of moneys that have been appropriated before that. In the research and development area—and if I am wrong in this statement I think Secretary Charyk will correct me—we spend the money rather quickly. We do not have to wait for a lot of hardware, although we have to wait for some. Some of the results of the research and development work are achieved in the same year that the budget is appropriated.

Mr. SIKES. I followed the statements that were made as to your choice in this restricted budget between men and hardware. I recognize the fact you made the proper choice if the limitations in your budget are accepted, but what disturbs me is the fact that the Air Force budget is shrinking rather materially, half a billion last year and a half billion this year, at a time when all costs affecting the Air Force are increasing. Salaries and wages are increasing, the cost of hardware is increasing, the cost of housekeeping facilities, everything that the Air Force uses costs more, yet the Air Force is required to do its job with a lower budget. Do you have any particular concern about that shrinking budget picture, or do you think you are able to adjust yourselves and live with it satisfactorily in view of the defense job required of you?

Secretary SHARP. I think that we can live with it, but I want to point out also, according to my figures, that the program, and this means what we expect to do in the way of contracting for procurement, etc., in 1960 was $19 billion and in the fiscal year 1961 it is $19.3 billion. This is not reflected in the new obligation authority that we are requesting. This is because we have carryover funds from other years that we can use for this procurement, so actually what we program, or plan to do with the money, is increasing. That is increasing by some $300 million between the fiscal year 1960 and 1961.

Of course, we have made major decisions such as cutting down the B–70 from a weapons system to a prototype development. These things save us funds which we can apply on other systems, and that is why we do not have to ask for larger new appropriations.

Mr. SIKES. General White, do you have any comment on that?

General WHITE. Well as the Secretary has stated, it is due to unobligated balances. In future years we will have to have larger appropriations and spending authorizations than this year to carry the program. Due to the cutbacks from the 1960 programs, we now have the means to cover this gap.

Mr. SIKES. There is a cutback in aircraft procurement. There was an increase in missile procurement. Do you consider that the reduction in aircraft is offset by the increase in missile procurement?

Secretary SHARP. I am not sure that I know what you mean by "offset." Are the funds available because of that switch?

Mr. SIKES. What I mean is, do we have an equivalent, or a greater amount of defense as the result of increasing the number of missiles at the expense of decreasing the number of aircraft?

Secretary SHARP. I think the net result of this is certainly an adequate deterrent, and I think it is an increase in our overall strength.

Mr. SIKES. Is that true in the fiscal year 1961?

Secretary SHARP. Do you mean with the funds in fiscal year 1961?

Mr. SIKES. I am talking about the current situation. We have been working toward this picture for some time now, a reduction in aircraft and an increase in missiles. Is the number of missiles coming into our inventory in the fiscal year 1961 sufficient to offset, or do they more than offset from a defense posture, the number of aircraft and the number of men that are going out of inventory?

General WHITE. In an absolute sense I think that is true, sir. We are continuing with the B–52 and continuing with the B–58. We have a stepped-up program in the F–105. and the weapons that are dropping out in the Strategic Air Command are B–47's, and we, ourselves, decided that without regard to any budgetary considerations—but manpower may have been an element in it—to drop two wings of B–47's for each new wing of B–52's and each new wing of B–58's. This year the big drop is in the F–108 and the B–70, which would have an impact in future years, but not this year.

NUCLEAR-POWERED AIRCRAFT PROGRAM

Mr. SIKES. I believe that you, General White, commented on the value of a nuclear-powered bomber. Yet this Nation seems to place little emphasis on the early development of such a craft. At the present rate of development, I do not see a nuclear-powered bomber coming into our inventory for a long, long time. Will you discuss the situation?

General WHITE. I could discuss it generally, and I am sure Dr. Charyk can add very substantially to anything that I might say.

Mr. SIKES. If this is really an important matter why are we not giving it more emphasis?

General WHITE. I am sure it is important for the future because it gives us a continuous airborne launching ballistic missile platform. However, it is my understanding that the state of the art only permits us to go just about at the rate we are going.

Mr. SIKES. There seems to be a general consensus of opinion that the Russians are going to beat us to it. That would indicate that they can push the state of the art along whether we can or not. Dr. Charyk, what do you say about this?

Dr. CHARYK. May I comment the funds that are going into the nuclear propulsion program are the largest for any item for which there is no specific operational requirement. I think that everyone agrees there is considerable military potential in a nuclear propelled aircraft provided that we can achieve the technical performance that would produce a militarily useful aircraft. The problem up to the present time has been to advance the technology to the point where we could actually build an airplane that would have interesting military performance capabilities.

The program at the present time is directed at two different approaches, at a direct cycle and at an indirect cycle where we are trying to develop a reactor that will have the performance capabilities to be put into an airplane that in turn will have useful and important military potentials.

Mr. SIKES. How much money are we spending and how soon will the prototype be ready for testing?

Dr. CHARYK. The funds in the program for the fiscal year 1961 are approximately $150 million, more or less, uniformly distributed between the Atomic Energy Commission and the Department of Defense.

The date as to the operational aircraft, of course, will depend upon the progress we have in the development of the fuel elements and the reactor.

Mr. SIKES. Do you have an estimate of the time when there will be a prototype?

Dr. CHARYK. Our present schedule, which assumes certain success in all phases of the program, is we would have a prototype airplane probably in late ———

Mr. SIKES. If we were to give additional emphasis to the program how much could we reduce that period—by 2 years?

Dr. CHARYK. The limitation at the present time is in the technical state of the art. It is difficult to say how much you can accelerate this by additional dollars. We feel that we are putting a maximum effort into the fuel element technology and the reactor technology in the direct cycle. We are proposing to augment the effort in the indirect cycle this year.

Mr. SIKES. Would you estimate we could save as much as 2 years by additional emphasis?

Dr. CHARYK. It is felt about the maximum time one could advance a flight date would be on the order of a year, if one entered into a program that involved large expenditures on the basis of major technical uncertainties and you were successful. If you were unsuccessful, it would mean you would have spent a great deal of money and not advanced the date at all.

Mr. SIKES. General White, does the Air Force feel that this somewhat leisurely approach is adequate in view of the possible military uses of such an aircraft?

Dr. CHARYK. I would not define it as a "leisurely" approach in view of the fact that the dollars that are being expended and have been expended are very substantial. As I indicated in the beginning, we are putting more dollars into this single item than any other item for which there is not a specific operational requirement.

Mr. SIKES. Any endeavor which apparently concedes first place in a new important field of development to the Russians is in my opinion leisurely. I guess there are differences of opinion on this.

Now, General White, would you comment on my question to you?

General WHITE. I can only say that the potential of an aircraft with relatively unlimited endurance, armed with such a weapon as an air-launched ballistic missile, would enormously enhance our capability. On the other hand, I am limited in what I can propose and work for, to what the competent scientific people tell me is the state of the art as to both propulsion and airframe adaptation.

ALERT CAPABILITY

Mr. SIKES. What is different about our present alert capability, or alert capability which we provided by the fiscal year 1960 budget, from that budgeted in 1961?

(The information will be included in a later volume of these hearings.)

EFFECTIVENESS OF 15-MINUTE ALERT

Mr. SIKES. How effective is the 15-minute alert which we have in view of the fact we may or may not have warning about an attack by the Soviets?

(The requested answer follows:)

The effectiveness of SAC's 15-minute alert is most pronounced today when the primary threat is Soviet bombers and we have considerable warning time in the case of large-scale bomber attack, thus allowing us time to launch a substantial retaliatory force comprised of a sizably augmented ground alert force. The exact size of the total force being dependent on the amount of warning.

The alert force represents a capability designed to respond to tactical early warning and is continually being improved. Given 6 or more hours of warning, the percentage of the force which would be launched is impressively increased.

At present this capability represents an effective and secure retaliatory force.

The key element in the continued effectiveness of this tactic and force is the warning we can expect about an ICBM attack by the Soviets.

Warning against an ICBM attack becomes particularly significant in the 1960–63 time period when it is estimated that the Soviets will have a large number of operational ICBM's.

During this period, warning against ICBM's will be provided in varying degrees by our ballistic missile early warning systems (BMEWS) and missile defense alarm system (Midas).

We are now developing an "on-the-shelf" capability in our strategic manned force to place a portion of the force on airborne alert, to complement the ground alert force during this critical period of progress toward an assured early warning system.

MOVABLE LAUNCHERS FOR MISSILES

Mr. SIKES. We have had considerable comment about the probability that the Russians will use movable launchers; in other words, launchers mounted on railway cars for their missiles.

We seem to be leaning away from that category until we get a solid propelled missile. Does this indicate the Russians now have solid propelled missiles; or do they have greater skill in the use of movable launchers with liquid propelled missiles?

(The requested answer follows:)

SOVIET MOBILE LAUNCHING SYSTEMS

Mobility appears to be a basic Soviet design consideration in most of their weapon systems. The use of mobile launching systems for their ICBM's would make our targeting problem more difficult and perhaps would reduce their vulnerability. However, the ICBM is a very complex heavy weapon system requiring considerable amount of ground support equipment. It is believed that the Soviets

could employ rail mobility in their ICBM program. We believe that this mobility would consist primarily of transporting the ICBM's along with the necessary ground support equipment to presurveyed launching sites. For shorter range, smaller weapons it is probable that mobile launchers will be employed. Probably not, however, on railway cars.

The Soviets are believed to have conducted research on solid propellants for large rocket engines. However, liquid propellants for their rocket engines are currently used.

From evidence available it is not possible to conclude that the degree of Soviet skill with respect to mobility is greater than that of the United States.

USE OF JET TRAINERS

Mr. SIKES. Does the Air Force propose to use all jet trainers? The Navy has stated because of their budget situation they are going to have to continue to use prop trainers although they had originally planned to change to jet trainers for basic training.

(The requested answer follows:)

USAF JET PILOT TRAINING PROGRAM

The USAF will have an all-jet pilot training program by fiscal year 1961. Primary pilot schools will be completely equipped with twin jet T–37 aircraft, with the exception of approximately 15 conventional T–28 aircraft used for certain military assistance program students. Basic pilot training schools are presently all equipped with T–33 jet aircraft and will convert to T–38 twin jet aircraft commencing in fiscal year 1961.

The USAF budget includes funds to complete the primary school conversion and continue the basic school modernization.

PREALLOCATION OF AIRLIFT FOR THE ARMY

Mr. SIKES. What airlift has been preallocated for Army use in the event of a limited war situation?

(The requested answer follows:)

The Joint Chiefs of Staff have not preallocated any airlift for the use of any service in the event of a limited war situation. Preallocation of airlift capability in a limited war would greatly restrict the inherent flexibility of the air transport force.

Because of the many imponderables involved in various limited war situations, the Joint Chiefs of Staff have not attempted to prejudge strategic issues concerning specific forces, their mode of transportation, and priority for deployment. Such decisions will be made by the Joint Chiefs of Staff at the time, depending upon the existing situation.

MODERNIZATION OF TRANSPORT AIRCRAFT FLEET

Mr. SIKES. What is the Air Force plan to purchase a new strategic cargo transport to modernize the aging fleet of the C–124 aircraft? When will those aircraft become operational in the troop carrier fleets? Will the Air Force continue modernization with the C–130B until such time as the new transports are available?

(The requested answer follows:)

Question. What is the Air Force plan to purchase a new strategic cargo transport to modernize the aging fleet of the C–124 aircraft?

Answer. The Air Force has requested $50 million in the fiscal year 1961 program for the modernization of MATS. These funds are for the development and design of a truly optimum cargo aircraft which will meet the requirements of the Strategic Airlift Fleet. It is expected that this cargo transport will also be compatible to efficient, economical carrier operations. The FAA and the Army have participated in the establishment of the specifications for this transport, giving further assurance that both military and civil air carriers needs will be met.

Question. When will these aircraft become operational in the troop carrier fleet?

Answer. This new cargo aircraft is not programed for troop carrier units. It is being procured to satisfy the Strategic airlift requirement under the operational control of the Military Air Transport Service (MATS). The first operational squadron will be available by June 30, 1964, based on a July 1, 1960, go-ahead. The second and third squadrons will become operational during fiscal year 1965.

Question. Will the Air Force continue modernization with the C–130B until such time as the new transports are available?

Answer. The C–130B is being procured for troop carrier medium (Tactical Forces) and not for the Strategic Airlift (MATS). Current plans call for procurement of the C–130B for the troop carrier medium five-wing objective, which includes three wings of C–130A's. In addition, it is contemplated that the C–130C will replace the C–123 troop carrier assault forces.

AVAILABILITY OF CIVIL RESERVE AIR FLEET

Mr. SIKES. I note that the Civil Reserve Air Fleet (CRAF) is available under conditions of general war and when a Presidential emergency is declared. What effect does the nonavailability of CRAF have upon an assumed limited war situation in an area such as Korea? Would there not be a sizable sharp fall in these limited war requirements?

(The requested answer follows:)

CIVIL RESERVE AIR FLEET (CRAF)

It should be recognized that while CRAF is available under conditions of general war and when a Presidential emergency is declared, CRAF, as a whole, can be activated under certain situations short of these conditions. If CRAF is not activated in a limited war situation it is contemplated that commercial contract airlift, as may be required, would be made available.

The latter question apparently relates to the amount of available airlift capability in a limited war situation. If this is so and commercial airlift augmentation were not available, then the total airlift capability would be reduced accordingly. It should also be noted that the use of strategically deployed forces overseas is contemplated in the initial phase of a limited war.

RESEARCH AND DEVELOPMENT FUNDS FOR CLOSE AIR SUPPORT, AIRLIFTS, MATS, AND SAC

Mr. SIKES. Out of approximately $1.8 billion to be spent on the Air Force research and development, how much will be spent for major programs that will support close air support, reconnaissance and tactical airlifts? How much will be spent for MATS modernization? How much on SAC?

(The requested answer follows:)

Costs associated with tactical forces, strategic forces, and Military Air Transport Service modernization:

The Air Force is requesting $1.3 billion research, development, test, and evaluation funds in new obligational authority for fiscal year 1961.

Thirty-six million dollar research, development, test, and evaluation funds are programed for close air support for the BULLPUP and V/STOL programs.

Ninety-five million dollar research, development, test, and evaluation funds are programed for reconnaissance, with the bulk of the effort being centered on MIDAS and DISCOVERER.

The estimated overall cost of maintaining tactical forces during fiscal year 1961 is approximately $2.5 billion. This amount includes research, development, test, and evaluation, procurement, construction, operation and maintenance, and military personnel.

In the strategic forces area $235 million is presently programed of which $221 million is earmarked for SAMOS and SKY BOLT (GAM–87). The balance is programed for MINUTEMAN, ATLAS, and TITAN.

No research, development, test, and evaluation funds are programed for tactical airlift or Military Air Transport Service modernization—$50 million of fiscal year 1961 procurement funds are programed for Military Air Transport Service modernization to meet jet-age requirements.

STRATEGIC AND TACTICAL AIRLIFT COSTS

Mr. SIKES. Out of an Air Force budget of approximately $18 billion for direct obligation, how much will be spent for strategic and tactical airlift?

How many strategic and tactical aircraft will be purchased for airlift modernization in the fiscal year 1961?

(The requested answer follows:)

STRATEGIC AND TACTICAL AIRLIFT COSTS

Twenty-five C–130B aircraft at $70.4 million are to be procured for tactical airlift in the fiscal year 1961 budget program. The $50 million for MATS modernization (strategic airlift) in the fiscal year 1961 program provides for development and preproduction only. Under this approach, actual procurement would take place in fiscal year 1962.

The overall MATS modernization program is still under study. A final determination of the actual disposition of fiscal year 1961 funds is still pending.

Of the total Air Force fiscal year 1961 budget, it is estimated that approximately $356.6 million will be spent for strategic and tactical airlift. This amount represents costs associated with strategic support squadrons, logistical support squadrons, Tactical Air Command troop carrier operations, and MATS troop carriers stationed overseas. Appropriations included in the above amounts are military personnel, operation and maintenance, and procurement.

In addition to the amounts included in the $18 billion direct obligations, the cost of strategic tactical airlift operation under the airlift service industrial fund is estimated to be $200 million. This cost is shared by all Department of Defense customers based on user requirements.

Mr. SIKES. Have you solved the rebuild problem that you had with the B–47 aircraft a year or so ago?

General WHITE. Yes.

Mr. SIKES. What degree of accuracy, what CEP, would you associate with the use of the HOUND DOG missile?

(Statement off the record.)

Mr. SIKES. That should be an extremely important weapon.

Secretary SHARP. It is quite an accurate weapon. We have flown it out over 500 miles so far.

Mr. SIKES. The range is from ——— to ——— miles?

General WHITE. I think ——— they consider the maximum development for this type weapon with its guidance to be over 500 miles.

Dr. CHARYK. Over 500 at altitude and less at low altitude.

Mr. SIKES. That is all.

Mr. MAHON. We shall reconvene at 2 o'clock.

Mr. SHEPPARD. Mr. Whitten.

Mr. WHITTEN. General, I first wish to commend you for the candid manner in which you have dealt with the questions that have been asked of you. As I indicated earlier, my own feelings are a little different sometimes from those of some members of the subcommittee.

OPPOSITION TO AIRCRAFT CARRIER

Listening to your testimony, I noticed two or three things that I think perhaps were not as fully developed as might have been. I understood you to say that within the Joint Chiefs of Staff your

recollection was that you were the only one who opposed this aircraft carrier; is that correct?

General WHITE. That is my recollection.

Mr. WHITTEN. I am no proponent of carriers or opponent of carriers. I am trying to develop for the record the facts. In your opposition and personal feelings about the carrier, do I understand from that you do not mean if the Navy is to have this much money in the budget and if they are to determine how they will handle the money that is made available to them, you know any place else in the Navy where this money could be better used?

General WHITE. I think that is generally correct.

Mr. WHITTEN. You do not know any better place within the Navy?

General WHITE. That is correct.

Mr. WHITTEN. So, then it comes back when you say you are opposed to the carrier, it means that the task that the Navy would perform with that carrier you feel the Air Force could do that job better, in your opinion?

General WHITE. I do not think that is quite the way I would put it, sir.

Mr. WHITTEN. I am not trying to put words in your mouth, General.

General WHITE. I would say within the priorities of tasks the Department of Defense and the services as a whole have to accomplish, I would prefer to see the money that must go into the carrier go on some other weapon system which I would conceive to be more important.

Mr. WHITTEN. That is right. Accepting your first answer, that weapon system and the handling of it would be in some other service other than the Navy because you have just said that within the Navy itself——

General WHITE. That is generally true.

Mr. WHITTEN. Again the point I make is that this controversy is at the Secretary of Defense level or at the White House level or Bureau of the Budget level, the assignment of this particular task to the Navy, you feel it should be assigned somewhere else and handled better.

General WHITE. I am not discussing in this connection roles and missions, nor do I believe controversy is the right way to describe it.

Mr. WHITTEN. You are not discussing roles and missions, but if the Navy gets all the money prescribed for it in the budget, which includes the carrier, you do not know any place else in the Navy they could better use that money than the carrier, but you believe the Defense Department could use that money better for something else than the carrier and if they did it, that something else would be in a service other than the Navy.

General WHITE. That is a fair statement, but that is not my reason for taking that position. It makes no difference to me what the service is.

Mr. WHITTEN. I am giving you credit for complete sincerity as to your beliefs as to how a mission could better be performed. My point is that it is a matter of whether you are trying to be for a particular service or not, the end result is that this task would be assigned to another service if your views had prevailed.

General WHITE. I think it would be an added increment to missions of other priorities which in this case would not be in the Navy.

Mr. WHITTEN. I would put it the other way. If this committee and the Congress should go along with all the money budgeted for the Navy, would you then say we should eliminate the carrier and return the money to the Treasury?

General WHITE. No, I certainly am not advocating anything. Under the questioning as to what my position was on the carrier, I stated it. I think each of the other Chiefs of Staff had similar divergencies of views as to how the overall priorities that could be accommodated within this total budget could be accomplished. Certainly, once the Secretary of Defense has that inherent problem of making a decision, based in many cases on divergent views and priorities of weapon systems——

Mr. WHITTEN. I thoroughly understand that and I am not trying to be argumentative with you, but I am trying to fix for the record what the end effect of your views would have been. As I understand it—correct me if I am wrong—if that particular money is to be given to the Navy, you cannot second-guess them as to whether the carrier should be included within that sum.

General WHITE. I think that is fair.

Mr. WHITTEN. Then it follows that the argument—I will not say argument—it follows that your view primarily goes back then to the fact that the particular assignment the Navy gets for the use of the carrier, you feel either your service or some other service could, in your judgment, better perform it at less cost.

General WHITE. Yes.

Mr. WHITTEN. In my service on this committee—perhaps I was born suspicious or curious or maybe it is because I was a district attorney for a long time—in trying to discharge my individual responsibilities on this committee two problems always make it hard for me to decide. One is that so frequently it looks to me as though the controversy as to which service is going to get the job and which company is going to get the business is involved. With those two facts involved in it, it makes it hard for me to get through the crust, so to speak, to see what is really involved in this matter.

EFFECT OF ECONOMIC INTEREST IN MILITARY PROGRAM

As to the matter of the B–58 and the B–70, which company manufactures the B–58?

General WHITE. B–58 is manufactured by Convair.

Mr. WHITTEN. Who heads Convair?

General WHITE. That is at Fort Worth, Tex. It is headed by a man named Naish.

Mr. WHITTEN. Who is handling the B–70?

General WHITE. North American Aviation.

Mr. WHITTEN. You can readily see that those two companies would have a great interest in which plane was used by the service, can you not? Is that right?

General WHITE. I am sure they would; yes, sir.

Mr. WHITTEN. I am getting you into places where if you do not know, all you have to say is you do not, so I am not putting you on the spot, in my opinion.

I thought I understood you to say you personally preferred the B–70 to the B–58, and that SAC preferred the B–70 to the B–58.

With you heading the Air Force and with General Power heading the Strategic Air Command and your views not prevailing, do you have any idea whether it is the influence of the Convair Co. as against the influence of the North American Co.?

General WHITE. In this case, and I think in the general case, there is absolutely no influence whatsoever.

Mr. WHITTEN. Not on you?

General WHITE. I do not think, anywhere.

Mr. WHITTEN. You have to limit yourself by saying you don't think. You could not profess to know.

General WHITE. No. What I know about the standards we have——

Mr. WHITTEN. Nobody has contacted me, but you could not say nobody has contacted members of this subcommittee. You just do not know?

General WHITE. That is right.

Mr. WHITTEN. Has not some of your inability, General, in the past on trying to determine between BOMARC and MACE and these various other missiles, has not to a degree that inability to get an agreement come because each service wanted to hold its particular place in the missile field, in your judgment?

General WHITE. I think, in all fairness, one has to say that in some instances and in some cases that does have a bearing, but I really think the difference is in training, background, and a philosophical view of the situation. I really think that. I am not sure the Congress did not help last year. Take, for instance, the BOMARC and NIKE–HERCULES——

Mr. WHITTEN. Get this straight. We have as much trouble with pressures, Congressmen and Senators, as any other place and we also have as much pressure put on us, by these various groups, including the services, we have as much of that as anybody else. I am not trying to pass this buck to your side of the table.

General WHITE. I appreciate that, and I do not think I was trying to put it in that context. I think the BOMARC and NIKE–HERCULES, did almost become a controversy in the public mind last year, and I think it was one in which the real issues were lost sight of. It was played up as a controversy between the Air Force and the Army. That was not so. It was incidentally Air Force and Army because the Army was the champion—and from their history of antiaircraft artillery I can understand why—they were champions of the point defense. I understand why the Air Force—because of its history of the manned interceptor aircraft—favored the BOMARC, which is a pilotless interceptor.

The whole problem was lost and it became an Air Force–Army controversy when in fact it really was a disagreement or different point of view on what is the proper and most economical defense, point defense or area defense, and it was lost.

Mr. WHITTEN. I am not trying to question anybody's motives and maybe I do not understand human nature as well as I think I do, but I forgive a whole lot of things because I feel I do understand something about human nature. Behind it was the fact that if the Army had kept that particular missile, in all likelihood they would still have been in the missile field.

General WHITE. They still are with that missile, and to a substantial degree.

Mr. WHITTEN. Does that not give added strength to their effort?

General WHITE. In this case I do not believe that if the Army had had all of the NIKE-HERCULES missiles approved that they asked for, that it would necessarily have—to come down to the point you are talking about—increased the size of the Army, caused more promotions in the Army, or any of the other reasons you might, if you go into this, attribute to purely selfish views. I am not attributing any to the Army in this case. What would have happened is that the Army would probably have had about the same amount of money they had and they would have had to choose between more of this and less of something else.

Mr. WHITTEN. Do not misunderstand me, I am not trying to attribute to either service selfish views as such. Each service believes in itself; it believes in what it does; it believes in its capacity to meet the mission. From listening on this side of the table to the services, including your own service, each of them feels it could do the whole job if the job were turned over to them, and many times each seems to want enough to take care of the whole job. It gives us a problem and I am sure it gives a problem to the Bureau of the Budget.

General WHITE. Could I turn that around in my own field? Say the Air Force had received less, suppose the BOMARC program had been canceled. What would the net effect have been to the Air Force? I think we would simply have maintained more manned fighter-interceptor wings in the Air Force. In this year's budget there would be an increased request for F–106's or, in retrospect, we might have had further argument to maintain the F–108. I do not think in this particular instance there was much in it for either service from a purely parochial point of view, shall I say.

Mr. WHITTEN. I am not trying to get evidence of that at this point and say anything is wrong with it: I am trying to recognize it. Do you have any idea how many Boeing people came down to Washington when this thing was up and how much pressure was put on Congressmen and military people?

General WHITE. I believe a good many aircraft manufacturers were here. I do not know about Boeing.

Mr. WHITTEN. The point I make is that with all that agitation, it leaves us hard put to look through all that and see what is the real McCoy. Are you familiar with the F–27 and the efforts by Fairchild?

General WHITE. Yes.

FULL FUNDING OF AIR FORCE CONTRACTS

Mr. WHITTEN. What is the amount that Convair will make on the B–58? What is the total volume of the contract for the B–58 with Convair and what would have been the cost had your desires prevailed if we had gone to the B–70 program with North American?

General WHITE. I cannot give that, but may I suggest that I do not think the comparison goes. The B–70 is a future project and the B–58 is one that is now in production.

Mr. WHITTEN. Under this full funding, to which I do not subscribe, if you had it in mind under full funding, we could see the amount of money involved in the B–70, even though it is a future delivery deal, but I would like to see what amount of business is involved so if somebody calls me, I can understand why they talk so loud on the telephone.

Secretary SHARP. That is a good point.

Mr. SHEPPARD. Will the gentleman yield?

Mr. WHITTEN. Yes.

Mr. SHEPPARD. I think if that particular subject is to be dealt with on a backlog basis, unless there is personal objection, it might be good if all firms could be indicated on a backlog basis to get a viewpoint of the whole situation.

Mr. WHITTEN. That is agreeable to me. I make no accusations, but when you deal with this amount of money where involved is not only this company's interest in contracts against that company's interest, but you get into what section of the country is the work going to be carried on in—I do not happen to know in either case where it would be, but I do know if it were in my area, I would have heard from a lot of folks wanting me to help see that it went this way or that way because my people are just like the folks in other sections. They are interested in those things.

(The information to be supplied follows:)

B–58 AND B–70 CONTRACT AMOUNTS

Through the fiscal year 1959 program, the face amount of contracts with Convair for development and production of 66 B–58 aircraft amounts to $1,992 million. Of this, $1,034 million has been subcontracted. This leaves $958 million as Convair's "in-house" work.

If the B–70 program is undertaken, through the development and production of 62 aircraft, the total face amount of contracts with North American is estimated to approximate $3,000 million over a period of several years. Of this amount, approximately one-half would be subcontracted.

UNINVOICED DOLLAR BALANCES OF MAJOR CONTRACTS

The following list shows the total uninvoiced dollar balances of major Air Force contractors against contracts being performed for the Air Force. This list shows the status as of October 31, 1959.

Contractors:	*Uninvoiced dollar balances*
Aerojet-General, Numbus, Calif	39. 4
AC Spark Plug, Milwaukee, Wis	24. 1
Allison Division, Indianapolis, Ind	77. 5
Arma Division, Garden City, N.Y	61. 4
Avco Manufacturing, Lawrence, Mass	33. 2
Bendix Radio, Towson, Md	34. 4
Boeing (Seattle, Wash., and Wichita, Kans.)	1, 276. 5
Burroughs (Detroit, Mich., and Paoli, Pa.)	84. 0
Convair (Astro Division, San Diego, Calif., and Fort Worth, Tex.)	1, 082. 6
Douglas (Long Beach and Santa Monica, Calif., and Tulsa, Okla.)	194. 2
Eclipse-Pioneer, Teterboro, Fla	41. 0
General Electric (Evendale, Cincinnati; Philadelphia, Pa.; Syracuse and Utica, N.Y.)	391. 4
Hughes (Culver City, Calif., and Tucson, Ariz.)	290. 8
IBM (Kingston and Owego, N.Y.)	254. 9
Lockheed (Burbank, Calif., and Marietta, Ga.)	154. 7
Marquardt (Ogden, Utah, and Van Nuys, Calif.)	53. 1
Martin (Baltimore, Md., and Denver, Calif.)	171. 5
McDonnell, St. Louis, Mo	294. 4
Minneapolis Honeywell, Minneapolis, Minn	40. 4
North American, Inglewood, Canoga Park, Calif	350. 4
Northrop & Radioplane, Hawthorne, Calif	152. 2
Pratt-Whitney, East Hartford, Conn	494. 7
RCA, Camden and Moorestown, N.J	191. 6
Republic, Farmingdale, N.Y	262. 1
Sperry Gyroscope Co., Great Neck, Long Island, N.Y	86. 6
Thiokol Chemical, Brigham City, Utah	35. 4
Western Electric, New York, N.Y	127. 1

MISSION SUPPORT FLYING PROGRAM

Mr. WHITTEN. Turning to something else, which is something that we had a considerable problem with, a few years ago—I believe this was in 1956—I insisted that we investigate the procurement practices of the Defense Department as against the policies, the policies being that which was spelled out and practices being what you did. That was quite an eye opener, but the thing surprising to me was when the Defense Department attempted to stamp "Secret" on our investigations of their activities. They did not succeed.

Last year for this year's use we had an investigation from this committee on the mission support flying program of the U.S. Department of the Air Force.

Mr. Chairman, unless there is objection, I would like to have the first nine pages, which is the summary of this, included in the record, which shows what was involved.

Mr. SHEPPARD. It is so ordered.

Mr. WHITTEN. Involved in this, if I interpret it right, independent of those used for pilot training and for regular flying—in other words, getting away from the language, which kind of covers up what is involved, in my opinion, it is the planes located at various points within your service for the personal convenience in business of the officers and personnel stationed there.

The investigator's report show that many times these personal planes have been used for what appears to be personal pleasure. Seventy-five percent of those records kept as to what the planes are doing is listed under the broad title of proficiency flying.

The thing that gets me is that this investigator's report, made by investigators who are employees of this committee and acting at the request of this committee, submits this to us with this notation on the front:

> This report is classified confidential because it contains an inventory showing the number of mission support aircraft assignments, such aircraft of various Air Force commands. This classified information appears on page 10, and if that page were removed, the report could be declassified.

In other words, the Air Force or the Department of Defense has held that that page, showing how many of these planes are to serve the personal convenience, in business mostly, that if we showed that, it would be apparently of value to the enemy. I note here that the Air Force Academy, which is an educational institution, student flying is somewhere else according to the testimony we had last year, this page shows they have 27 planes out there for personal convenience.

If Russia knew all about that and if we sent it to them in a letter, every word capitalized, how could it hurt our defenses for them to know the Air Force Academy instructors had 27 planes to serve their needs? Can you tell me?

General WHITE. Certainly that item would have no significance.

Mr. WHITTEN. It shows how many planes you have got here in Washington to serve the personal convenience of the Air Force. Can you tell me how that would in any way endanger us if Russia happened to get hold of it?

General WHITE. The only thing I can conceive is that there is a policy that numbers of aircraft and their locations are classified, and this was applied without any particularity to this subject, but other-

wise I see no reason. I say aircraft are not assigned for the personal convenience of any officer in the Air Force.

Mr. WHITTEN. In some instances you got them assigned to an individual.

General WHITE. Yes, but not for personal convenience.

Mr. WHITTEN. It is so he can handle his business without having to fool with public transportation and stand in line and call up and make reservations. Of course it is. In most cases they are assigned to a particular base or point rather than to a particular officer, but you do have that situation. In fact, may I say here the total number is 3,312 for that purpose. These pages I have asked to be inserted will show some of it.

Recalling this investigation of procurement practices, it was an eye opener. It appears in our hearings for the year 1956 on the 1957 budget. It was so bad that Secretary Wilson said it made him sad and mad to realize his Department had any such record. The Defense Department tried to slap "secret" on that. I cannot see that if Russia knew how shoddy our procurement policies and wasteful practices were, I cannot see that that would hurt our defense; but if the public knew it, it might affect Defense's ability to get money and might result in Defense cleaning it up. So I insisted we publish it. We had a knockdown, drag out, frankly, before we got it in the hearings.

I can't for the life of me—and I want a report straight from the Secretary of Defense—see that to publish this, even if we had to strike out a few titles, could in any way be any comfort to the enemy.

I can see if this material on page 10 were printed, it might result in some public effort, in view of other findings that our investigators have made, public effort insisting that something be done about it. I come back to this. How much of this effort by the Air Force and the Department of Defense to hide this kind of thing from the public eye is to protect us from Russia and how much is to protect you from the American public?

General WHITE. We have not seen the report. I simply cannot give you an answer except in general that certainly information which obviously is of no——

Mr. WHITTEN. I do not mean to ask you something you do not know. I think the subject has been described sufficiently by me to where you cannot be under any misunderstanding as to what I am talking about.

General WHITE. The instances you talk about and in general the whole subject is, in my opinion, not——

Mr. WHITTEN. You can give me an oral answer why the Department is trying to keep that page out of the record, or you can go back and come up with a real answer, except I want to question whoever brings the answer up.

General WHITE. I can only repeat what I said a moment ago, that this type of thing is covered in a broad policy that numbers and locations of aircraft are classified. I do see one or two line items such as the U.S. Security Service here, that perhaps has some sensitivity; but in general I am inclined to agree with you, that this summation cannot have any value to the enemy.

Mr. WHITTEN. Mr. Chairman, in my opening request I did not ask that page 10 be included. I ask now that it be included subject

to the Department of Defense going over the matter and reporting to the committee whether it stays in or out.

Mr. SHEPPARD. The Chair will take this position on the ruling. The gentleman's proposal shall remain pending until we determine whether or not it is permissible under existing circumstances and the advice we have from Chairman Cannon as to its acceptability in the record. Then if it is determined that it is not acceptable because of the instructions we have, of course, then the gentleman will be within his rights and prerogatives to make a suitable motion.

Mr. WHITTEN. That is all.

General WHITE. This report is dated January 1960, and we have not seen it. I would like to have the opportunity of seeing it.

(The summary referred to follows:)

MISSION SUPPORT FLYING PROGRAM U.S. AIR FORCE

I. INTRODUCTION

A. Directive

The Committee on Appropriations under date of June 16, 1959, directed that an inquiry be made into the mission support flying program of the Department of the Air Force with particular emphasis on the following:

(1) Travel by ranking military officers and civilian officials of the Department, with representative sampling of names, places, purposes, and timing.

(2) Travel by such officers and officials in transport-type aircraft, with representative sampling of places, purposes, passengers carried, and timing.

(3) Travel by such officers and officials from the continental United States to points outside the continental United States with representative sampling of places, purposes, passengers, and timing.

(4) Availability of commercial air travel to destinations indicated in the above.

(5) Cost of travel performed in the above, including military pay, fuel and lubricants, and maintenance costs, including comparison with commercial costs where applicable.

B. Scope of inquiry

Inquiry was directed into the various aspects of the mission support flying program of the Department of the Air Force. The categories and types of flying accomplished, the costs, the number and distribution of aircraft, and the number of pilots in the program were ascertained by the staff. Interviews were conducted with numerous Air Force officials at Washington and at Air Force bases.

Flight records of mission support aircraft for the period June 15, 1959, through September 15, 1959, were reviewed at the following 14 Air Force bases:

Andrews Air Force Base, Md.
Barksdale Air Force Base, Shreveport, La.
Bolling Air Force Base, Washington, D.C.
Langley Air Force Base, Langley, Va.
MacDill Air Force Base, Tampa, Fla.
March Air Force Base, Riverside, Calif.
Maxwell Air Force Base, Montgomery, Ala.
McChord Air Force Base, Tacoma, Wash.
Mitchel Air Force Base, Long Island, N.Y.
Nellis Air Force Base, Las Vegas, Nev.
Norton Air Force Base, San Bernardino, Calif.
Offutt Air Force Base, Omaha, Nebr.
Peterson Field, Colorado Springs, Colo.
Wright-Patterson Air Force Base, Dayton, Ohio

These bases were selected because they constituted command headquarters, operated a large number of mission support aircraft, or were bases from which aircraft departed the continental United States. The period of activity was confined as indicated since complete flight records were not available prior to June 15, 1959. At the bases visited, the staff reviewed each individual flight conducted during the period by all mission support aircraft assigned these bases.

In reviewing the flight records, particular attention was afforded travel by general officers and ranking civilian officials in transport-type aircraft, travel by

general officers and Air Force pilots in connection with proficiency flying, and travel by general officers and ranking civilian officials from the continental United States to points outside the United States.

In all instances wherein the records reviewed suggested a type of activity pertinent to this study, the staff made additional inquiry to further identify the activity and to obtain from responsible officials and sources an explanation of the activity.

Where it was deemed appropriate, the staff obtained commercial airline costs to provide a comparison with costs of travel in mission support aircraft. Where mission support aircraft were used for travel outside the continental United States to points served by regularly scheduled Military Air Transport Service (MATS) flights, the staff determined the charge or fare for the MATS flights. While it is recognized that these fares do not represent the actual per passenger cost of operating MATS, such fares represent the charge which would have been made to the command whose personnel performed the travel.

II. DEFINITION AND ELEMENTS OF MISSION SUPPORT FLYING PROGRAM

A. Definition

The term "mission support flying program" is applied by the Air Force to all aircraft or flying other than that associated with tactical operations and student training. The tactical category includes the firstline aircraft which are assigned to airstrike, air defense and reconnaissance forces, plus other aircraft, such as tankers, which directly complement the bomber and fighter fleet. The student training category embraces the aircraft utilized by the Air Training Command in the production of pilots and other aircrew personnel. Thus the mission support program is that program which provides aircraft for proficiency flying, administrative flying, and special mission flying activities.

B. Elements

1. *Types and categories of flying accomplished.*—Typical examples of use made by the Air Force of mission support aircraft include:

Transportation of personnel and equipment in unit exercises	Accident investigations
Instrument training for fighter pilots	Inspections
Unscheduled movements of critical parts	Staff supervision
Target simulation for intercept training	Conferences
Missile range surveillance	Observer proficiency
Rocket range surveillance	Pilot proficiency
Local search and rescue	Weather observation
Flight checks of radar and navigation aids	Humanitarian missions
Mail and supply of outposts	Courier projects
	Support of other Government agencies

In general, mission support flights make essential contributions to the technical aspects of flying (e.g., weather and navigation). They provide the capability for filling unexpected gaps in supply and maintenance processes and for quick, on-the-spot responses to problems arising in performance of all basic management functions—planning, organizing, directing, coordinating, and controlling. Any given flight may involve the accomplishment of several tasks pertaining to different functional areas, all of which insure performance of the primary mission of the base or unit of aircraft assignment.

The Air Force divides mission support aircraft into six categories according to the purpose for which an aircraft is assigned to a command. These categories are described as "support categories." Each category is assigned a code designation which identifies this assignment. Air Force Regulation 65–110 lists the codes and the categories as follows:

SA_____ Administrative aircraft: Aircraft assigned to support command administrative, executive, and inspection functions.

SF_____ Special activity aircraft: Aircraft assigned to accomplish specific special activities of the Air Force and other Government agencies.

SD_____ Operational support aircraft: Aircraft assigned to Air Force units in support of proficiency flying for those rated personnel who are not assigned to crew positions and cannot be provided their flying requirements in aircraft assigned in any other code.

SI..... Command mission support aircraft: Aircraft assigned to accomplish necessary unscheduled airlift of personnel and materiel in support of Air Force bases and units.

SH..... Local rescue aircraft: Aircraft assigned to accomplish necessary local rescue missions.

SC..... Combat unit support aircraft: Aircraft assigned to combat units and combat supporting units for the direct support of combat units and combat supporting unit operations.

2. *Costs.*—

(*a*) General: The operation and maintenance expenditure by the Air Force for mission support aircraft for fiscal year 1959 was $197,139,000. This expenditure represents the cost of fuel, oil, and aircraft parts but does not include salaries of maintenance crews, airmen, or pilots.

The programed operation and maintenance expenditure for mission support aircraft for fiscal year 1960 is $201,083,000.

(*b*) Support category: The operation and maintenance expenditure for mission support aircraft for fiscal year 1959 and the programed expenditure for fiscal year 1960 by support category are as follows:

	1959	1960
Administrative aircraft	$12,606,000	$13,712,000
Special activity aircraft	26,127,000	27,882,000
Operational support aircraft	108,719,000	94,059,000
Command mission support aircraft	32,562,000	47,690,000
Local rescue aircraft	3,583,000	4,402,000
Combat unit support aircraft	13,542,000	13,338,000
Total	197,139,000	201,083,000

(*c*) Hourly cost: Officials of the U.S. Air Force furnished the staff related costs per flying hour for mission support aircraft, as well as a standard average hourly salary rate, based on a 40-hour week, for officers and airmen by pay grade. Pertinent cost figures will be utilized later in this report and comparisons made between commercial airline travel and military aircraft travel where applicable.

The related costs per flying hour include fuel and oil and maintenance. The cost information pertaining to fuel and oil was based on U.S. Air Force stock fund standard prices effective July 1, 1959. The maintenance cost factors represent the average cost of identifiable depot, field, and organizational maintenance expenses, including pay of civilian personnel incurred in the "Operation and maintenance" and the "Research, development, and test" appropriations. The factors also include pay of military personnel on the basis of man-hours expended in field and organizational aircraft maintenance. These factors exclude costs associated with replenishment of stocks of nonexpendable aircraft and engine spares and spare parts.

The standard hourly salary rate for officers for each grade was computed according to the U.S. Air Force on base pay including longevity, subsistence, quarters, personal money allowance for general officers, incentive, and aviation pay. The hourly rate for airmen was computed on base pay including longevity, subsistence, quarters, clothing allowance, incentive, and aviation pay. These are standard averaged rates, designed only for statistical and functional reporting purposes.

3. *Number of pilots.*—It was determined that there were 25,424 pilots engaged in the mission support flying program at the end of fiscal year 1959. This represented 47 percent of the total Air Force pilot inventory. The programed number of pilots under the mission support flying program for fiscal year 1960 is 26,029, which represents 49 percent of the total programed Air Force pilot inventory.

4. *Pilot hours flown.*—During fiscal year 1959, the Air Force flew 7,655,546 pilot-hours. Of this total, 2,066,161 pilot-hours were flown under the mission support flying program. This represented 27 percent of the total pilot-hours flown by the Air Force.

The programed Air Force pilot-hours for fiscal year 1960 is estimated at 7,447,330. Of the total programed pilot-hours, 2,054,032 are under the mission support flying program. This represents 28 percent of the total programed flying hours for fiscal year 1960.

5. *Flight records.*—In its efforts to secure adequate information concerning the reasons for which flights were made in mission support aircraft, the staff noted

that information recorded on the flight records was for the most part extremely general in nature and lacking in detail. For example, the following were found to appear most often in the records reviewed as the reasons recorded as the justification for or purpose of flights:

Proficiency flying	Official business
Administrative	Staff visit
Staff or command flight	VIP classified
Transport distinguished visitor	S–1
Transport personnel	S–2
Transport military personnel	R–2
Ordered	

Approximately 75 percent of the records reviewed reflected the purpose of the flight as "proficiency flying," "administrative," or "staff or command flight." In almost every instance the flight records contained no indication as to the purpose of flight other than the reasons indicated above. Because of this it was necessary for the staff, in the instances where additional information was desired, to interview persons who might have some knowledge concerning these flights, such as individuals assigned to the operations office or pilots. The staff encountered considerably difficulty in these efforts, since it had to rely on individual recollection, and in many instances was unable to secure any additional details or was able to secure only partial explanations.

For example, on June 15, 1959, Gen. Otto P. Weyland, retired, former commander, Tactical Air Command, departed Langley Air Force Base, Langley, Va., in a C–118 aircraft (4-engine medium transport) for Andrews Air Force Base, Md., where he deplaned. The flight record indicated this was a "staff or command flight." The staff was unable to secure any further details as to the reasons for this flight since no additional record was available, and personnel assigned to Langley Air Force Base stated they were unable to recall any information concerning this flight.

Another illustration of the problems encountered in reviewing base records was involved in the flight of a U3A aircraft (2-engine utility transport) which on September 9, 1959, made a round-trip flight between Andrews Air Force Base and Wright-Patterson Air Force Base. Available records at Andrews stated this was an "administrative support" mission to airlift Mr. Charles W. Early, a civilian employee of Air Research and Development Command (ARDC) to Wright-Patterson Air Force Base. The staff determined through interview with an ARDC official that the actual purpose of this flight was to airlift a particular piece of equipment to Wright-Patterson Air Force Base. It was explained the flight was not primarily to transport Mr. Early and should have been described on the flight record to "* * * airlift equipment with Mr. Early as a hitchhiker."

6. *USAF Mission Support aircraft inventory.*—The Air Force furnished an inventory of worldwide USAF Mission Support aircraft as of July 31, 1959. A schedule reflecting the total support aircraft inventory for the USAF and by major air commands, separated into 1-, 2-, and 4-engine jet-type and reciprocating aircraft as well as 1-engine helicopters is as follows:

Command	Total	Jet aircraft			Reciprocating aircraft			Single engine helicopter
		1-engine	2-engine	4-engine	1-engine	2-engine	4-engine	
Alaskan Air Command	68	17			14	29		8
Air Academy	27	21				5		1
Air Defense Command	380	135	1		59	139	1	45
Air Materiel Command	268	99	5	2	21	123	3	15
Air Research and Development Command	191	69	3		34	85		
U.S. Air Force in Europe	297	94	10	6	25	144	3	15
Air Training Command	254	115			14	88		37
Air University	203	92			37	74		
Caribbean Air Command	25	3				21		1
Continental Air Command	167	19			10	134	2	2
Headquarters Command	338	100	7		31	166	27	7
Military Air Transport Service	160	43			15	67	28	7
Pacific Air Forces	211	55	6		30	81	24	15
Strategic Air Command	485	166		1	29	240	7	42
Tactical Air Command	227	92			27	76	10	22
Other	11				3	3	5	
Total USAF	3,312	1,120	32	9	349	1,475	110	217

Mr. SHEPPARD. Mr. ANDREWS.

CAPABILITY OF AIR FORCE UNDER PRESENT BUDGET

Mr. ANDREWS. Mr. Secretary, you told us in your general statement that the Air Force had gone from a peak of 414 combat squadrons at the end of 1957, with nearly 920,000 military personnel, to 316 combat squadrons and 825,000 military personnel.

The Army people have told us that their division strength has been cut and in some cases company strength was cut, but with new and additional weapons the individual units had greater capability.

Can you say the same thing about the capability of the Air Force with this reduced strength?

Secretary SHARP. Yes; there is no doubt about that. With the modern aircraft we have today, one aircraft has a great deal more effectiveness than perhaps several aircraft of the older type. We do have more firepower, and I think perhaps this is a military matter. Maybe you would like to hear from General White on that.

Mr. ANDREWS. I would like to hear the general discuss that.

General WHITE. Of course, the advent of the atomic weapon has increased the firepower of aircraft enormously. The development of various kinds of rockets and other new types of weapons has greatly improved the firepower capability of every type of combat aircraft I can think of. It is true we have reduced units. I think the net firepower is very much greater. There is a limit beyond which you cannot go. As of now, I think that is a fair statement.

Mr. ANDREWS. You think as of now our Air Force has as great striking power as we have ever had?

General WHITE. I think so.

Mr. ANDREWS. And that our capability to retaliate is as great today as it has ever been?

General WHITE. Relative to itself, that is true.

Mr. ANDREWS. Is that capability growing each year?

General WHITE. The absolute capability of the Air Force is growing each year, including the period for which this budget is proposed.

Mr. ANDREWS. I am sure you know as much as any man in the country about the capability Russia has to strike us and what we might do if they did get into a nuclear war with us. You certainly know what capabilities we have to retaliate.

In the light of your knowedge as to the capability of each country, what is your opinion about the possibility of an all-out atomic war between Russia and this country?

General WHITE. I would not say it is impossible, but I do not think any rational man would start it. That is about the most I could say.

NUCLEAR PROPELLED AIRCRAFT

Mr. ANDREWS. Mr. Secretary, you stated that you are continuing the development of a nuclear propulsion system to provide in the future a nuclear-propelled aircraft weapon system. I think I have been on this committee about 7 years and I have been hearing a statement like that every year and still we have no system. Could you or some of your associates tell us just exactly what the picture is as of today with reference to our efforts to get a nuclear-propelled aircraft in being?

Secretary SHARP. I think I would prefer to have Dr. Charyk answer that, since it is in his area, and he is the special expert on it.

Mr. WEAVER. Will the gentleman yield?

Mr. ANDREWS. Yes.

Mr. WEAVER. Could they also include what money is in this budget for any research and development work?

Mr. ANDREWS. Please also put in the record the total amount that has been spent to date on this program and the money in this budget, if any, for that purpose.

(The information to be supplied was not received in time for printing.)

Dr. CHARYK. The total dollars in the fiscal year 1961 budget for aircraft nuclear propulsion are approximately $150 million, of which $75 million is in the Department of Defense budget and the balance in the Atomic Energy Commission budget submission.

The main efforts in the program continue to be the development of a reactor for aircraft use that would be capable of providing the kind of performance that would permit a useful and important military mission to be accomplished. The problem is to achieve reactor fuel elements which will have the capability to achieve the kinds of temperatures that are necessary to give adequate aircraft performance and also to have a lifetime sufficient to make a militarily useful device.

At the present time our efforts are directed along two general lines: one, the direct cycle program at the General Electric Co., and the other in regard to the indirect cycle program at Pratt & Whitney.

Mr. ANDREWS. Are you any nearer an answer to this problem today than you were last year, Doctor?

Dr. CHARYK. I think there has been progress made. The program at the General Electric Co. has been redirected in the direction of fuel elements which can come closer to meeting the kind of performance that would provide a militarily useful aircraft.

Mr. ANDREWS. How long have you been working on this program?

Dr. CHARYK. This program, I believe, has been going on for perhaps better than 10 years.

Mr. OSTERTAG. Will the gentleman yield?

Mr. ANDREWS. Yes.

Mr. OSTERTAG. This may be completely out of line, but the consideration of the B–70 was of grave concern. Would atomic power development for aircraft have any association with a craft such as the B–70?

Dr. CHARYK. There are at least theoretical possibilities that a nuclear powerplant could be developed that would permit the attainment of B–70 type performance with nuclear power.

Mr. ANDREWS. Dr. Charyk, do you have any opinion as to when a system will be completed that can be used in an aircraft?

Dr. CHARYK. We have laid out a schedule which would suggest that if the appropriate technical milestones are successfully reached, we would have the capability to fly a nuclear aircraft in the latter part of ———. This assumes success in the technical program. If difficulties are encountered in the technical effort, the date would, of course, slip.

Mr. ANDREWS. Is there any other branch of the Government working on a nuclear propulsion system for aircraft other than the Atomic Energy Commission and the Air Force?

Dr. CHARYK. No, there is not.

Mr. ANDREWS. Has your delay been due to lack of funds.

Dr. CHARYK. No; I think it is fair to say that the delay has been due to technical limitations in regard to fuel elements and other important aspects of the reactor part of the problem. In addition, the very severe shielding problem that is encountered in the case of using this type propulsion for aircraft.

Mr. ANDREWS. Do you still think such a system is practical?

Dr. CHARYK. I think that there is little doubt that in time we can develop a powerplant that can provide a prime propulsion system for an aircraft. The specific performance characteristics that could be achieved by this aircraft are still uncertain. It will depend upon the nature of success we have in the technical program.

Mr. ANDREWS. You do not expect completion of the project before ———.

Dr. CHARYK. There is little likelihood that this date could be advanced by very much. It would probably be not more than a year at best.

Mr. ANDREWS. In your opinion, is there enough money in this budget to carry out this work?

Dr. CHARYK. I think the program is very adequately funded.

Mr. SHEPPARD. Will the gentleman yield?

Mr. ANDREWS. Yes.

Mr. SHEPPARD. Doctor, in your response there insofar as the research is concerned, the involvement to which you are referring, when you are setting a limitation you are doing it upon the basis of the known value, but under scientific procedures I have understood heretofore you would not want us to interpret from this statement that it would not be within the realm of possibility for shortening that time by a breakthrough?

Dr. CHARYK. It is possible. It is something you obviously cannot predict.

Mr. SHEPPARD. That is what I mean.

Dr. CHARYK. If at some stage in development we did achieve certain breakthroughs which could advance the date, we would request additional funds to prosecute such a program.

Mr. ANDREWS. As of now, you do not need any more money, you think the program is adequately funded in this budget?

Dr. CHARYK. As far as we can tell at the present time, it is. The measure here, I think, is simply the technical state of the art.

SKY BOLT MISSILE PROGRAM

Mr. ANDREWS. When did you expect to have the new SKY BOLT missile completed and in service?

General WHITE. It is under development. I should say it is under study at the moment. Actually, we do not have a full-scale R. & D. program on it. Again, Dr. Charyk could give better and more specific details on the program.

Dr. CHARYK. This is a program in the very early state. We have had under intensive study a development program for such a missile system.

Mr. ANDREWS. Is that program adequately financed in this budget?

Dr. CHARYK. As of our present knowledge of the problem, we think there are adequate funds. Of course, as we get into the program, it could well evolve that the operational date could be advanced by additional funding. Again, if this should develop to be the case, I am sure we would request additional dollars to do so.

Mr. OSTERTAG. Will the gentleman yield?

Mr. ANDREWS. Yes.

Mr. OSTERTAG. Doctor, is the problem with regard to the SKY BOLT one of developing the missile or is it developing a means by which such a missile can be launched from an aircraft?

Dr. CHARYK. There are certain problems in regard to the missile, but these are actually not the major problems. The major problems relate to the development of the complete equipment in the aircraft, including the appropriate computational facilities which would permit an accurate determination of location and trajectory from any point at which the aircraft might happen to be. These are the problems which are more pressing than the missile problems.

Mr. ANDREWS. Will this missile SKY BOLT have atomic capability?

Dr. CHARYK. Yes, sir.

Mr. ANDREWS. What will be the difference between the SKY BOLT and the HOUND DOG other than range? As I understand it, the range of the HOUND DOG will be about 500 miles and the SKY BOLT will be around a thousand miles.

Dr. CHARYK. The other difference, of course, is in the nature of the missile. The SKY BOLT is a ballistic missile. The HOUND DOG is an air-breathing missile. So that the defense problem against the two types of missiles is quite different.

Mr. ANDREWS. What is the present status of the HOUND DOG program? When do you expect to have it operational?

General WHITE. The first operational missile has been delivered to SAC as of last month, I believe, and we have a program which comes right on.

Mr. ANDREWS. Both of these weapons will add considerably to your firepower capability, will they not, General?

General WHITE. Very much indeed.

Mr. FORD. Will the gentleman yield?

Mr. ANDREWS. Yes.

Mr. FORD. This probably should be off the record, but what is the difference in the guidance system between HOUND DOG and SKY BOLT?

Dr. CHARYK. Off the record.

(Statement off the record.)

Mr. FORD. We always hear about, as far as ballistic missiles are concerned, the need to know exactly where you are and the point which you are seeking to hit. In the case of an aircraft flying at substantial speeds, that is quite a difficult problem, is it not?

Dr. CHARYK. It is a matter of determining accurately the location of the aircraft and accurately predicting its change of position to the point where the missile is actually launched.

General WHITE. I think we would anticipate over unknown territory being able to locate the aircraft within a quarter of a mile, and if you can see the ground and you have prepositioned spots, I think it is within the limits of geodetic accuracy.

(Discussion off the record.)

Mr. ANDREWS. Do you have any money in this budget for additional B–52s?

General WHITE. Yes, sir.

Mr. ANDREWS. And B–47s?

General WHITE. We are not producing B–47s.

Mr. ANDREWS. Have you finished your program of reworking the frames of the B–47s?

General WHITE. Yes, that is complete and satisfactory.

May I add one thing about the SKY BOLT and the HOUND DOG that I do not think has been clearly brought out?

Mr. ANDREWS. Yes.

General WHITE. The HOUND DOG is an air-breathing rocket, really, with a jet engine, turbojet engine, and moves at supersonic speeds; whereas, the SKY BOLT is like the ATLAS or the POLARIS or the THOR, it is a ballistic missile and moves at hypersonic speeds—mach 5 or over.

Mr. ANDREWS. As a matter of fact, it is another IRBM with a range of 1,000 or 1,100 miles?

General WHITE. An airborne IRBM; yes.

Mr. MINSHALL. Will the gentleman yield?

Mr. ANDREWS. Yes.

Mr. MINSHALL. Would the present day antiaircraft defenses such as they have around Moscow be effective against the HOUND DOG?

General WHITE. It would be less effective against HOUND DOG than it would be against an airplane that moved at mach 3.

Dr. CHARYK. It is because of the comparatively small radar reflection.

General WHITE. The radar reflection is almost zero in the case of the missile as against the aircraft. Theoretically, it is as vulnerable to antiaircraft defenses as an airplane moving at the same speed, but it is less vulnerable on account of the smaller radar reflection.

Mr. MINSHALL. The SKY BOLT would be almost immune to air defenses?

General WHITE. It would be as immune from that type of defense as the ICBM would be or as any other missile would be. The airplane could be a thousand miles away from the target in the case of the SKY BOLT just as he could be over 500 miles away in the case of the HOUND DOG.

Mr. ANDREWS. Do you consider the B–47's safe today or airworthy?

General WHITE. Very; yes, sir; completely.

MANNED BOMBER PROGRAM

Mr. ANDREWS. When do you expect to get B–58's into your service in numbers?

General WHITE. The first aircraft goes into an operational unit this year.

Mr. ANDREWS. How does the B–58 compare with the B–47 for range and speed?

General WHITE. The range of a refueled B–58 is a little bit greater than a B–47. The B–58 has the advantage that it is subject to many types of profiles, part supersonic and part at subsonic cruising speed. I could give you a typical B–58 profile against a typical B–47 profile,

but I think the major difference is that the B–58 has somewhat greater range under a typical mission. For the supersonic part, the dash, as we call it, of the B–58 you have to degrade the overall distance it can go by a factor of possibly 2 to 1. It is difficult to specify what it is because at supersonic speeds you use up fuel much more rapidly. There is a constant equation of how much is supersonic against how much is subsonic and the variations of altitude, whether you are at altitude going in, at altitude coming back from the target, and so forth. However, it is a more versatile airplane than the B–47 in every respect.

Mr. ANDREWS. If you stick to the B–58 program, do you eventually plan to phase out all B–47's and put the B–58 into service?

General WHITE. We plan to phase out the B–47's at the rate of two wings of B–47's for each additional B–52 wing and each additional B–58 wing, which as of this year's program amounts to taking out six wings. There may be one unit delayed but that is the formula. This program calls for three wings of B–58's and one additional wing of B–52's.

Mr. ANDREWS. The B–58 is the future medium bomber?

General WHITE. That is correct, sir.

Mr. ANDREWS. The future long-range bomber is the B–70?

General WHITE. That is correct, sir.

Mr. ANDREWS. That is not in the picture at this time other than the prototypes?

General WHITE. That is right.

Mr. ANDREWS. What would the B–70 add to your capability other than altitude and speed? What could the B–70 do that the B–52 cannot do except give you more altitude and more speed?

General WHITE. There is quite a number of things it can do.

Mr. ANDREWS. If you are looking for a system of weapons delivery the B–70 would not be a new system. It would be an additional long-range bomber with greater speed and greater altitude capability.

General WHITE. I think the way to look at it in that respect is: What does it do to the enemy? It makes all of his or certainly the majority of his air defenses against the air-breathing threat obsolete as of the time that aircraft becomes operational.

PERSONNEL STRENGTH

Mr. ANDREWS. I think you described this whole Defense budget pretty well when you said on Friday that you were satisfied with the size of the pie but you did not like the way it had been cut.

General WHITE. I think I would have been better advised to say I did not agree, that if it had been up to me, I would not have set the priorities as they were set.

Mr. ANDREWS. That means the Air Force would have received a bigger slice of the pie.

Did you discuss the reduction of Marine strength in your Joint Chiefs' meeting? They went down last year from 200,000 officers and men to 175,000 officers and men? Was that discussed very thoroughly in the Joint Chiefs' meetings?

General WHITE. We discussed the personnel levels of all the services.

Mr. ANDREWS. Do you want to comment on the final decision?

General WHITE. I do not actually remember, sir. I truly do not. I did not know the Marine strength goes down as of this budget. It went down last year.

Mr. ANDREWS. I said last year and again at the same level.

General WHITE. It holds at that level this year. I think there was no particular discussion about it as of this year.

Mr. ANDREWS. But there was last year, I assume.

General WHITE. There was last year.

Mr. ANDREWS. In that case the Marines think they received too small a cut of that pie.

General WHITE. That is perfectly true. I think I said all of the Chiefs would probably have different views on the subject and did have. It makes it pretty tough for the Secretary of Defense and for the Congress.

Mr. ANDREWS. If we had a pie that met the approval of all the services, it would be at least the size of that large light overhead when compared to an ordinary-sized pie.

Mr. SHEPPARD. May the Chair suggest that sometimes controversy is healthy.

Mr. ANDREWS. That is true. Mr. Secretary, the Navy people told us they figured that they had about 7 percent inflation to combat in this next year's budget. Percentagewise, what do you think inflation will do to your budget next year?

Secretary SHARP. The cost of equipment seems to be on the rise every year. I do not know exactly how much of this is due to inflation and how much is due to complications of newer systems. Every time we build new airplanes it is more complicated than the one before, and also missiles, until we get to the MINUTEMAN, which we think will be a little simpler This seems to be the trend. I am sure that we do have more expensive hardware to buy every year. If we bought the same number, we would pay more for it every year. We have to get more firepower out of that hardware if we are going to be able to keep the total firepower up because we are not going to be able to buy as many units.

Mr. ANDREWS. I notice the Army National Guard will be cut by this budget about 10 percent. The same is true of the Army Reserve Forces. Your Guard and Reserve Forces will show a slight increase, will they not?

Secretary SHARP. Very slight. It is practically level at 71,000 a piece.

Mr. ANDREWS. Can you give us a good reason why your Guard and Reserve Forces are not cut and those of the Army are cut?

Secretary SHARP. We think ours is pretty small. They are not enormous mobilization type forces. They are geared to handle the emergencies immediately, without mobilization. For instance, the National Guard has actual fighter aircraft on alert in each wing that they have. I mean by that, interceptor aircraft for air defense purposes. They also have aircraft that are ready to augment the Tactical Air Command in the area of fighter bombers in case of smaller wars where they need fighter bombers.

The Reserve Forces are largely occupied with the transport field to support the Army in its movement. I think we could get along with a smaller National Guard and Reserve numerically than proba-

bly the Army can, but I think we have to limit it to some reasonable size.

Mr. ANDREWS. How long after M-day would it take to get one of your Reserve or Guard units in service and ready to go?

General WHITE. They are all D-day units—supposed to be ready on D-day. We would have to allow a few days or hours to really make them a hundred percent effective, but they are supposed to be ready to go on call—which is one reason we have such a small Reserve and small National Guard.

Mr. ANDREWS. That is all, Mr. Chairman. Thank you.

Mr. SHEPPARD. Mr. Riley.

ICBM PROGRAM

Mr. RILEY. Mr. Secretary, I have been impressed with the frankness and the directness of the answers that you and General White and your staff have given to the committee. I am sure you realize we cannot reach an intelligent decision unless we have all the available data, the facts, and the reasons and decisions you have made, both from the services and in the consolidated and coordinated report you send up to Congress. We have the same responsibility or more than some of the folks at headquarters have.

In regard to the ICBM program, could this program be expedited if there were a decision to expedite it?

Secretary SHARP. I would say "Yes," that we could expedite the ATLAS program if we think it is a wise thing to do. The advantages of this, when the TITAN program is coming in at about the same time with a more advanced weapon, is questionable. In answer to your question, it can be done.

The TITAN program, I think, is moving about as rapidly as it can move. It is still in the research and development stage. As you know, we have had difficulties with the TITAN, as we did with the ATLAS, and we have not gotten beyond those yet and I think we would be unwise to consider expediting that program until we are sure we have the bugs out.

I do not believe we could expedite the MINUTEMAN program much at this stage, as Dr. Charyk mentioned earlier. We have technical problems there to solve before we know which direction we go.

Mr. RILEY. When do you think the MINUTEMAN will become operational?

Secretary SHARP. It should become operational about summer of 1962—begin to be operational.

Mr. RILEY. What are the advantages or disadvantages of the TITAN compared with the ATLAS?

Secretary SHARP. It is a true two-stage missile, which has greater capabilities of growth. I mean by that, it can increase its range and loadcarrying capabilities, I think, that would be beyond what the ATLAS could do. Furthermore, it is easier to put the TITAN into the silo, into the hole in the ground, and launch it directly from the silo because of its size and shape. It has those two distinct advantages.

Mr. RILEY. I believe either you or General White, testified this morning, that you had all the range you needed in the ATLAS, so let us eliminate the matter of distance.

Secretary SHARP. Let us say it can carry bigger payloads to the ranges we want it to carry.

Mr. RILEY. It can carry a bigger payload and is more susceptible to being shot from a silo.

Secretary SHARP. From a hole in the ground without an elevator having to raise it up, which we have to do with the ATLAS. Those are two of the advantages. There is one other. I suppose it could be done in the ATLAS, but it is much more difficult. We can put storable-type propellants in it that we do not have to pump in just before we decide to fire. This reduces the problem of logistics and construction of the tanks, for liquid oxygen that we have to have for the earlier missiles. This solves a great deal of this problem and is, therefore, very much more economical. It is more economical overall, counting the construction.

Mr. RILEY. Is the ATLAS susceptible of improvement to take care of some of the advantages in the TITAN?

Secretary SHARP. The ATLAS is susceptible to growth. Perhaps Dr. Charyk could answer.

Mr. RILEY. In answering the question, Dr. Charyk, I would like for you to tell me whether there is any substance to the belief these two programs are duplications and therefore wasteful in view of the fact that you are going to get MINUTEMAN a couple of years from now.

Dr. CHARYK. I might begin by saying one of the additional attractive features about the TITAN is the fact that it has a greater growth capability than the ATLAS. It is, of course, true some of the improvements could be incorporated in the ATLAS with the penalty of greater complexity and greater cost.

We think of the TITAN as producing ultimately both a booster system that can have important implications in the military space program as well as providing a capability for a large payload ICBM. I think it is worth pointing out that the payload of the solid propellant missiles, MINUTEMAN and POLARIS, will really be quite a bit smaller than the type of payloads that ATLAS and TITAN will carry. We see on a continuing basis the need for a certain number of missiles with desirable military characteristics, and by that I mean satisfactory logistics, low exposure time, and quick reaction, which will also have the capability of delivering to the maximum ranges of interest to the United States a payload with a comparatively high yield weapon. This will not be possible in the case of either POLARIS or MINUTEMAN.

Mr. MINSHALL. You speak of payload and having an adequate payload. Does not the ATLAS have a capability of carrying an adequate payload?

Dr. CHARYK. Actually, the improved type will have the capability for ICBM payloads of the order of ———. We believe there are certain important military requirements for payloads of that size.

Mr. MINSHALL. How many times larger a payload can the TITAN carry than the present ATLAS?

Dr. CHARYK. The growth TITAN will carry a considerably larger payload, ———, as indicated on the ICBM ranges.

Mr. MINSHALL. How do you translate that into megatons?

Dr. CHARYK. This would be a weapon that would be of the order of ——— megatons.

Mr. MINSHALL. You do not feel that the present ATLAS weapon will carry enough yield in megatons to do the job on some military target?

Dr. CHARYK. We think there will be a continuing need for a comparatively small number of missiles to be used against very hard targets that will carry very large yield weapons such as ———.

General WHITE. Another application of TITAN is its potential application to space systems. Because of the heavy warhead it can carry it will have a greater flexibility in respect to space systems than the ATLAS. Also, because of its rigid construction as against the balloon type of skin that the ATLAS has.

Mr. RILEY. I am not sure that I know exactly what you mean by susceptible to better growth. Could you put that in layman's language for me?

Dr. CHARYK. That is what I was leading up to, and I indicated you would like to have a missile with a large payload capability that would have the desirable characteristics of quick reaction time, a very short exposure time, that would permit the propellants to be stored on board more or less indefinitely and that would require low servicing.

Mr. RILEY. It would still have liquid propellants?

Dr. CHARYK. It would still have liquid propellants?

Mr. RILEY. But they would be storable?

Dr. CHARYK. Storable as distinguished from the cyrogenic-type propellant that we are using at the present time. Originally both the ATLAS and the TITAN will have payloads in the ——— class, which is certainly a very interesting payload capability. I was trying to emphasize that looking ahead we do see a requirement for a comparatively small number of missiles with an even larger payload capability, up to the order of ———.

TYPES AND NUMBERS OF MISSILES REQUIRED

Mr. MINSHALL. What are your targets?

Dr. CHARYK. I think this will sort of depend upon the type of hard targets that will evolve in the Russian complex as is certain to be the case with us as our capabilities are improved.

Mr. MINSHALL. As of January 25 how many types can you use?

Dr. CHARYK. I think at the present time we certainly do not need a payload capability for targets we know of that is in excess of the type of payloads that can be delivered by ATLAS.

Mr. MINSHALL. In other words, you say the need for a heavier yield weapon is conjectural at this time?

Dr. CHARYK. I think it is good conjecture because there is a definite trend in the hardening of control centers and command centers, and I think it is very logical the Russians will move in the direction of protecting them.

Mr. MINSHALL. We do not know where these control centers are admittedly. What are we going to be shooting at?

Dr. CHARYK. I hope we have a basis for determination of where such targets will be.

Mr. MINSHALL. You had better improve. That is all I have Mr. Chairman.

Mr. OSTERTAG. Doctor, do I understand from your previous answer that our capability today with the ATLAS is sufficient to meet any requirements in the light of developments in Russia today?

Dr. CHARYK. Well, considering this in the context of the availability of high yield weapons in the SAC bomber forces, in other words, I am thinking of this as a complement to the SAC bomber forces, and to that extent I think the statement is correct. As we go down the road I think we will clearly want missiles with larger yield and better accuracy.

General WHITE. Aside from the pinpointing of particular targets for a particular weapon, I think it axiomatic that the two things that determine the effectiveness of a weapon are its CEP, or accuracy, and the amount of explosive you get, so the tendency, if you are going to grow with the state of the art, is to get more accuracy and more bang. The TITAN does the latter and presumably will do the former just as well as the ATLAS.

Mr. WEAVER. I wonder if we could have, for the purpose of the record, just how much explosive effect one megaton would have. Last year I was told by some one at BMD that a megaton was equivalent to 100 miles of freight cars filled with dynamite. Ever since that time I have never been able to find anybody to confirm that explanation of its destructive effect. I would like to know just what a megaton is as far as its explosive and destructive effect is concerned.

General WHITE. A megaton is the equivalent of 1 million tons of TNT, and a kiloton is the equivalent of 1,000 tons of TNT. How it translates into railroad cars I cannot say, but it would be a big explosion. The warheads on Hiroshima and Nagasaki were on the order of 20 kilotons.

Mr. WEAVER. Then, if you were to multiply the reaction there so many times, you can get a proper answer?

General WHITE. Yes.

Mr. WEAVER. Then what does 1 million tons of TNT do on a target or an area as far as its explosive and destructive characteristics are concerned?

General WHITE. I think that is a pretty complicated thing.

Dr. CHARYK. I think we can provide for the record some typical damage data for various yield weapons at various distances that might very well answer your question.

(The information requested is classified and has been furnished for the committee's use).

AIRBORNE MISSILES

Mr. RILEY. General White, I realize that we have to have these missiles and I want to see them developed as rapidly as possible and made as reliable as possible, but I am of the opinion that the airplane is going to be around with us for a long while. I will not live long enough to see them disappear out of the skies and probably my grandchildren will not.

In the supersonic plane, am I correct that your HOUND DOGS, or SKY BOLTS are carried under the wings?

General WHITE. The HOUND DOG is and I am not sure that we have worked out the other.

Mr. RILEY. One weapon is air-breathing and one is ballistic. Will you have to shoot it out of a tube like a submarine, or something of that nature?

General WHITE. I think it depends upon the airplane and depends upon the final configuration of the SKY BOLT how you do it. The HOUND DOG is carried externally on the B–52.

Mr. RILEY. Do you anticipate it will be possible to carry the HOUND DOG and a SKY BOLT under the B–58 or the B–70 when it is brought into being?

General WHITE. The SKY BOLT I would anticipate will be carried by the B–70. I doubt if there would be any advantage in the HOUND DOG being carried on the B–70 because the airplane would go as fast as the missile in that case.

Mr. RILEY. I only asked that because they both serve the same purpose.

General WHITE. They are both for the same purpose.

Mr. RILEY. Would it be possible to transport anything else besides HOUND DOGS and SKY BOLTS in B–58's and B–70's? Would it be possible to carry any other things, either a human or freight load at the same time?

General WHITE. The B–58 capability with respect to carrying people would be exceedingly limited and it would be very expensive to do. It will carry bombs.

Mr. RILEY. It is going to have a bomb bay?

General WHITE. It will have a pod that carries the bomb. The B–70 could carry a multiple load, many different variations in the bomb load. It could carry a considerable number of persons if it were made to that kind of a configuration.

Mr. RILEY. If you are going to launch missiles from under the wings, you are eventually going to do away with the bomb bay, or do you expect to keep it?

General WHITE. The B–52 is going to carry two HOUND DOGS and its full load of bombs, and one of the ways it is going to get into the more difficult targets is shooting its way in with these HOUND DOGS and dropping its bombs on the target.

Mr. RILEY. I see. That is the B–52?

General WHITE. Yes.

B–70 PROGRAM

Mr. RILEY. Now, what about the B–70?

General WHITE. The B–70 may not have the same requirement for shooting its way in, but these weapons will be exceedingly accurate. If we want to put the SKY BOLT on the B–70 we can, but it will carry a very large bomb load. The bomb load, I would say, would be the primary weapon as we see it now for the B–70.

Mr. RILEY. These questions originated from the article that my colleague, Mr. Sikes, put in the record this morning. It is stated that while Russia may not be building military planes the possibility is they have a commercial frame which can easily be converted because they do not expect to have bomb bays, they expect to have something like your HOUND DOG or your SKY BOLT under the wings, and therefore it would be easy to convert them from commercial planes.

I asked my questions to see whether or not you contemplated something of the same sort, or whether you are going to keep your bomb bays in addition.

General WHITE. We would plan to keep them in addition.

Mr. RILEY. In both the B–58 and the B–70?

General WHITE. The B–58 is not planned to carry either of the air-launched missiles.

Mr. RILEY. I recall some testimony we had some days ago when some question arose as to whether or not the Air Force needed a supersonic plane of say Mach 3. I believe that is the B–70. The present B–52 has some advantage in the fact that it can fly at a lower level if necessary than the supersonic planes. Now, what advantage do you conceive for the Air Force in having these very high speed supersonic planes?

General WHITE. The chief advantage is going to be speed and the altitude as against the low altitude. The low altitude is a variable technique that may or may not pay off. Right now we think the low altitude with the B–58 is a good technique, but the enemy may very well get a good defense against that and we will have to go higher and faster. Higher and faster is always desirable in the air game. The B–70 is going to carry a very considerable bomb load. It has many, many advantages that the B–52 does not because the B–52 is a subsonic airplane.

Mr. RILEY. That is a little puzzling to me because I know when a bird flies high and fast it is not easier to hit than one that flies low and fast.

General WHITE. I have heard it said that it would cost an enemy $40 billion in 5 years to build defenses against the B–70. I imagine that if he had a mach 3 bomber it would cost us on somewhat the same order to find defenses against such a weapon.

Mr. RILEY. Then there is in your opinion a decided advantage in having high flying, fast supersonic planes, capable of delivering a nuclear payload?

General WHITE. There is.

Mr. RILEY. Could the configuration of either the B–70 or the B–58 be changed to make transport planes out of them if you did not have your bomb bay?

General WHITE. I think that it would be a proper statement to say that the B–58 has almost no potential in that respect. The B–70 does have a considerable potential, not only in itself, but in the civil adaptation that could be made to that type of an aircraft.

Mr. RILEY. With some changes it could be made into a transport plane?

General WHITE. Yes.

MISSION OF TACTICAL AIR

Mr. RILEY. You are gradually eliminating now a number of your fighter squadrons. What is the mission for TAC now and how many wings do you propose to keep?

General WHITE. We have tactical air wings in Europe, in the Far East and in the Tactical Air Command. The purpose of the tactical air forces in general is to support the Army in close support operations. Another mission is what we call interdiction, which is taking out targets of opportunity that appear at a distance behind the lines. A third is, counterair, that is, knocking out the enemy's tactical air, which would be attacking our forces.

Mr. RILEY. Can TAC make a contribution in your opinion to limited war?

General WHITE. It is, in my opinion, the major air effort in small wars. Where SAC comes in in a limited war is its role as a steel umbrella to cover the deployment of other forces and to prevent the limited war expanding into a general war. Tactical forces on the locale of the limited war, would comprise the bulk of the air forces engaged in a limited war. That can run the gamut all the way from dropping leaflets up to using atomic weapons of various sizes according to the need as well as rockets, machineguns, and conventional weapons.

Mr. RILEY. And they are very much more of a maneuverable type than the larger planes; are they not?

General WHITE. They are more maneuverable. They must be because they are subject to enemy air attack from enemy fighters. In a local show they would be primarily engaged in areas where you can expect enemy air attack. They could also expect ground fire and they must be maneuverable because they must be able to attack pinpoint targets close to our own lines in support of the Army.

CLOSING OF BASES IN UNITED STATES

Mr. RILEY. Do I understand that you are having to close down some of your airbases in the continental United States?

General WHITE. That is a concommitant of reducing our forces. We have to close some bases in order to cut down the overhead and the cost.

Mr. RILEY. Could you give the committee the criteria that you used in selecting the bases that you kept?

General WHITE. I can give you a few from the top of my head. I am sure that we have a regular formula for it. I would say the No. 1 thing is its location with relation to its mission. Another criterion, obviously, would be the relative economy of operating that base against another base of similar attributes, but not as well built. You may have to have repairs on the runways, and on buildings. It may not have as much dependent housing available; and so on. Climate has its impingement. There are probably a hundred factors that we could consider.

Mr. RILEY. I am particularly interested in efficiency and economy of operation where you have bases doing pretty much the same work and how you decide between them for the same mission. I believe that is all.

ABILITY OF MILITARY TO SPEAK FREELY BEFORE CONGRESS

Mr. FORD. General White, this morning in the Washington Post there appeared a story with a headline "Administration's Actions Tend To Silence Military."

The second paragraph in that article reads:

> Whether so intended or not, they make it more difficult than usual for Congress to get the honest personal opinions of ranking military men as to the adequacy of the President's defense program.

Would you care to comment on the allegations made in that article?

General WHITE. I am unaware of any inhibitions, particularly before a congressional committee. I hope our testimony before this

committee has backed up my statement here. Nobody has ever given me any advice as to what I shall say and shall not say. Obviously, there are certain proprieties inherent in being part of an organization that one must observe. It is more a question of how you say things than what you say.

Mr. FORD. There has never been any direction by either the Commander in Chief or the Secretary of Defense as to what you should say before any congressional committee?

General WHITE. That is correct, sir.

Mr. FORD. It is most important for us on this committee—and others on other committees—to be certain that we get the best advice and counsel that you and others in positions of responsibility can give. I certainly proceed on the assumption that what you say is your best judgment as to the adequacy of our military program overall, or any particular parts of it.

In this same article there is discussed a speech that you made recently before the Press Club of Washington, and the question and answer part subsequent to the speech. Apparently, you were asked the question about the B–70 program and you made a response. Could you tell us in your own words what transpired in that question and answer period in reference to the B–70 program? If you want to insert the actual text of what was asked and said, fine—but would you care to amplify?

General WHITE. We evidently have it here. As I remember, it was a pretty difficult session because, naturally, the newsmen were hoping I might say something controversial, for which I do not blame them. I did my best not to, and I do not think there was any need for me to have done so. There were many variations on the theme of just exactly what I did say, and many different treatments of what was said.

Mr. SHEPPARD. May I say to my splendid friend from Michigan, I think the record should speak for itself in the circumstances. I think that it should be made a part of the record at this point.

Mr. FORD. Unless there is objection, we will insert the questions and answers in their entirety in the record and then the record can speak for itself.

(The portion of the text referred to follows:)

The CHAIRMAN. Was the decision to cut funds for the B-70 bomber made by the Air Force or by the Budget Bureau? [Laughter.]

General WHITE. Well, a good short answer to that would be that it wasn't the Air Force.

The CHAIRMAN. In view of the general belief in the Air Force that the B–70 is essential to national security, as expressed by General Power out at SAC and by others, will you kick over the traces and ask Congress to restore funds to keep this bomber on the desired development and production schedule?

General WHITE. Well, obviously, I lost a good part of a decision; and I hope, equally obviously, I wouldn't be here now if I weren't able to accept that.

I think it is also fair to state that in properly constituted [inaudible], where I am under interrogation, you can be certain that I will testify honestly and according to my convictions. [Laughter and applause.]

The CHAIRMAN. General, you may have answered this in your speech, but somebody has put it in a more precise form: Looking ahead five years, do you see any mission for manned combat aircraft? If so, what, and what kind of aircraft?

General WHITE. I have often said that as far into the future as I can see—and maybe I don't see too far, but I think I can see another 10 years and maybe more—there will be a requirement for manned aircraft, I think, in every field of

aeronautical combat. The one which looks to me to have the predominant requirement for the indefinite future will be in the tactical field, where we work with the Army very closely, where the targets are targets often of opportunity, things that come up at the last moment, or certainly are not fixed targets. So, I would say, in the tactical field particularly, the manned aircraft is here to stay.

In the fighter-interceptor field, I would say that manned aircraft are going to be required in some proportion for a long time ahead for the simple reason that until there is developed an antiaircraft or antiairspace weapon which is effective both against missiles and manned aircraft, we are going to have to have two systems. Now, those two systems will be, one, an antimissile system and the other an antiairbreathing weapon system. That, in turn, can be divided, as it is presently, into three systems. We have now the manned interceptor; we have the unmanned interceptor, which is the BOMARC; and we have the point defense, which is the NIKE-HERCULES—those are the three that exist today.

Well, now, is there a future for the manned fighter interceptor? I would say definitely, very definitely. Even though the F–108 has been canceled, I still foresee a requirement not necessarily for the F–108 but for a long-range fighter interceptor for the simple reason that the air-launched missile is here. We have it in the HOUND DOG. The enemy is developing similar missiles, and it means that the aircraft, the incoming airbreathing aircraft with its missile can launch its load long distances from the target. That means you must be able to reach it, reach the vehicle before the missile is launched. At the moment, we don't have any other way than to have an airborne environment, which means the radar, the acquisition radar and the weapons that we can send out in a long-range weapon. Now point defense won't do it, and even the BOMARC won't do it when the ranges are much greater than the HOUND DOG. So I foresee a long-range interceptor, a manned aircraft.

In the bomber field, there are many reasons. There are many things that a bomber can do that a missile can't, as it stands now. Maybe someday the missiles will be more versatile than they are now. For one thing, you have flexibility with a manned aircraft that you don't with a bomber. I could talk a long time on this, and not knowing what kind of questions are coming next, maybe I ought to; but I will try to cut it short. You can recall the flexibility that you have with the manned aircraft. It can carry a vastly greater load than any known ballistic missile at the moment; it can carry a multiple load. It has all sorts of psychologlal implications. I simply can't imagine resting our entire or the preponderant part of our offensive capability on a static system such as a missile stuck in the ground or sitting on a railroad, or even in a submarine. The enemy and your friends can't see this thing. It is not going to be good enough to say, "Oh, you should see the submarines we have under the sea and the missiles we have in these holes all over the United States." They are going to have to see something flying at a very high speed over great distances.

That, briefly, is my feeling about manned aircraft for the future.

The CHAIRMAN. Would you estimate when the mach 3 transport aircraft will become operational?

General WHITE. We are building a prototype of the B–70, which is a mach 3 aircraft, and I would say that a mach 3 transport would almost inevitably have to be a follow-on to the military development in that field because of the really great expense involved in developing such a machine.

The CHAIRMAN. At the Air Force Association convention in Miami last September you spoke of development of a "high-performance, all-purpose Air Force plane" as a major Air Force goal. Where does this project stand?

General WHITE. Well, at that time I had in mind the B–70. I still think the B–70 has these potentialities. It is a big airplane. It could carry some two or three score of people to any place on the globe within 5 hours. It could carry, as I recall, five or six HONEST JOHN weapons of the Army with its serving crews from here to Formosa in about 4 hours.

This same aircraft can have potential as a space-launching vehicle. I think the scientists are a little less certain of this than I am in my general ignorance; but the fact is that we don't know just where an airplane that would have the capability to take a second-stage rocket to 70,000 feet at mach 3—what is the implication of that to space weapons. I should say—and I think scientists will agree to that—it could have a very great implication.

The B–70, or such an aircraft, could carry out the mission of a long-range interceptor. Granted, it would be very expensive. But it could carry an enormous radar dish, which would enable it to have its own airborne early warning and

acquisition environment. It could carry many long-range air-to-air rockets, and I think the idea of a single, all-purpose weapon is one that could be exploited, and some day I hope it will be.

The CHAIRMAN. Well, General, that was a very eloquent exposition of the role of the B–50 [sic]—certainly the most eloquent I have ever heard—which leads me to probe again. Are our military demands being overruled by clerks or is the decision to cancel the B–70 program one by the Commander in Chief?

General WHITE. I get my orders from the Secretary of Defense on budgetary affairs, and I think I'll just let that one rest there.

The CHAIRMAN. Well, you can't say I didn't try.

General WHITE. There was one question to which I gave a reply, and maybe this gives me an opportunity to elaborate a bit. I understand exactly why it turned out, in my opinion, to be misinterpreted. I was asked who made the decision on the cutback in the B–70. I replied that I got my budgetary orders from the Secretary of Defense. That was very widely held as saying that the B–70 cutback was a budgetary decision. Well, actually, that was not what was in my mind at the moment. I do not think the B–70 cutback was a budgetary decision. Obviously, I wanted to make certain where my orders came from, and what I meant was when a program in the future is cut back very drastically it means we must take budgetary action right now in order not to waste money. So that is really what I had reference to in relation to getting budgetary orders from the Secretary of Defense. I could elaborate on that a little further.

When this subject arose, I, in the agony of going through this cutback, volunteered, without too much consultation with my Secretary, that I would find a couple of hundred million more dollars in the Air Force's budget to make up the difference. I realize that in doing so I was possibly risking the loss of $200 million at the chance of getting this program continued more or less at the early date. The proof of the pudding is that, while we did not get the increased program, they did not take the $200 million away.

Mr. FORD. In other words, it could be said quite legitimately that the decision to go from a ——— plane B–70 program to a two plane prototype program, which we now have before us, was a technical rather than a purely dollar consideration?

General WHITE. It was a technical consideration and there were differing evaluations as to the probable or possible future course of events.

STATUS OF U.S. DEFENSE POSTURE

Mr. FORD. Several weeks ago a very prominent person made, in my opinion, a very serious charge. He said, "I think the President was misinformed as to some of the things he told the American people in respect to our defenses." As I said, I think that is a very serious charge. I presume that the Commander in Chief, the President, gets his information as to the status of our defenses from the Defense Department, the Secretary of Defense, and the various service Secretaries, and the Joint Chiefs of Staff.

General WHITE. That is correct, sir.

Mr. FORD. Do you know of any misinformation that has been given the Commander in Chief, the President, about the status of our defenses?

General WHITE. No, sir.

Mr. FORD. This charge was also made, that the President's statement—and I presume either in his state of the Union message, or at

some subsequent press conference—was that our position as to the status of our defense was oversanguine. I was interested in what the implication might be by that word, and according to the dictionary oversanguine in this sense probably means, "ardent, anticipating the best."

Would you say the Presidents statements in reference to our defense were oversanguine?

General WHITE. I do not think it is appropriate for me to comment on what the President said. I cannot say that I disagree with him in the overall context.

Mr. FORD. This same individual on this same date said:

It should be clear to all Americans that we are further behind than we were a year ago in the defense missile field.

Would you agree with that statement?

General WHITE. No, sir, I do not agree with that.

Mr. FORD. To be more specific about the President being misinformed, this same prominent individual specifically said:

The President was misinformed as to our missile capabilities and our POLARIS program.

You are probably not the best witness to testify about whether he was or was not misinformed about the POLARIS program, but I certainly think you are the best witness to know whether the President was misinformed about our missile program.

General WHITE. There is no way that I know of, sir.

Mr. FORD. Secretary Gates submitted his annual report or statement to this committee a week or so ago. I think the statement was probably the best I have heard in 8 years on this subcommittee. I would like to ask your opinion about some of the statements he made to see whether or not you are in agreement with them. I will read them to you.

On page 3 of the Secretary's statement he said:

But the impression in some quarters that the Soviet Union has overtaken, or even outdistanced the United States in military power, is simply not supported by the facts.

Would you agree or disagree with that?

General WHITE. Will you read that again?

Mr. FORD. Surely.

But the impression in some quarters that the Soviet Union has overtaken, or even outdistanced the United States in military power, is simply not supported by the facts.

General WHITE. I agree with that statement as stated.

Mr. FORD. On page 4 of the Secretary's statement he made this comment:

It is the conclusion of those who have analyzed this matter that even a surprise attack by all the missiles the Soviets could muster would not suffice to destroy enough of our retaliatory striking forces to enable him to make a rational decision to attack.

Would you agree with that statement?

General WHITE. I would agree with that.

Mr. FORD. Would you agree with that statement were an amendment added to it to include all of their attacking forces in addition to missiles?

General WHITE. Yes; I would.

Mr. FORD. On page 5 of his statement Secretary Gates said:

It is also possible the Soviets might elect to produce and deploy missiles in larger quantities than is presently estimated. Our analyses show that even under such circumstances the resulting differences in numbers in itself would not enable the Soviets to gain a strategic posture which might tempt them to initiate a surprise attack.

Would you agree with that?

General WHITE. I think that is one that is subject to degree. Where he says, might elect to produce and deploy missiles in larger quantities than is presently estimated, I think that is true, but I would think you would have to say in some points the number of missiles would begin to make a difference. What he must have reference to is what we know about their capability, but if there are unknown capabilities there would be a limit to which that statement could apply.

Mr. FORD. We have an intelligence community estimate which the Defense Department is relying on. In this specific area there is some difference of opinion between the intelligence community estimate and the Air Force estimate.

If you use even the Air Force's estimate in that area, would you agree that that statement is correct? That is being a bit more definitive than just the broad question.

General WHITE. Yes; even with what I understand our intelligence officers' views on it to be, speaking as of now, and as of the period covered by this budget, I would agree with that.

Mr. FORD. General Twining submitted to this subcommittee a statement, part of which is reproduced on page 135 and 136 of our hearings, which were published last week. On page 136 in the last two paragraphs of General Twining's statement there are statements of importance. I will not read them. They should be reproduced in the record. Will you read those two paragraphs and indicate your concurrence or disapproval?

General WHITE. Starting: "If an aggressor is to succeed in destroying us * * *?"

Mr. FORD. Yes.

General WHITE (reading):

If an aggressor is to succeed in destroying us, or our allies, his plan must be designed to knock out at the first blow, and in one mortal blow, the United States and allied capability to retaliate, or at least reduce it so that his homeland will not receive unacceptable damage in return.

I think that is true.

On the basis of all the information available, and in view of the mix and strategic location of our retaliatory weapons systems, I just do not believe that any nation possesses the ability to destroy us, or attack us, without receiving unacceptable damage in return.

I agree completely with that.

ICBM PROGRAM

Mr. FORD. Mr. Secretary, in this same issue of the Washington Post is a story with headline: "Atlas Rivals Red's Best, Sharp Says."

Do you mean that our ATLAS as to payload capability, range, reliability, and accuracy rivals what we believe to be the Red's best?

Secretary SHARP. I would limit that. I do not think that I would include payload capability. I think perhaps the Russians have more payload capability than we because of their large propulsion system.

I would think as far as doing its job is concerned, which is to strike the targets in Russia that we have set out for ATLAS, it will do that, and therefore it will rival anything that the Soviets may have to do their job with, which is to strike points in this country. In other words, it is perfectly adequate.

Now, it is possible to make the ATLAS go as far, perhaps with not the same payload, as the Russian missile we saw the other day, though I think this is not a very appropriate comparison. I do not think that it proves anything.

Mr. FORD. Last year this committee had before it the budget for the fiscal year 1960 and in the budget there was an ICBM program submitted that called for 9 ATLAS squadrons and 11 TITAN squadrons, as I recall. The Congress approved at least through partial funding a boost in that program to 17 ATLAS squadrons and 11 TITAN squadrons for a total of 28. The budget before us now calls for 13 ATLAS and 14 TITAN for a total of 27.

Last year, General White, you indicated that the ATLAS program then submitted of 9 and 11 was, one, the Air Force program, and, two, you personally concurred in that recommendation.

When I say, "It was the Air Force's program," as I understand it from the testimony last year that was the program the Air Force recommended to the Secretary of Defense. It was approved without change by him. The testimony in the hearings last year indicates that to be the facts.

What is the situation for the fiscal year 1961? Is the program before us of 13 ATLASES and 14 TITANS, a total of 27, the Air Force's program?

General WHITE. It is, sir.

Mr. FORD. In other words, it was not reduced by the Secretary of Defense?

General WHITE. We originally had the 28 squadrons, and in order to get 1 additional hardened squadron earlier we shifted it to the program we have now, which comprises the 27 squadrons instead of 28.

Mr. MAHON. Off the record.

(Discussion off the record.)

Mr. FORD. The point that I want to be absolutely certain of in my own mind is that the program we now have before us is the program that the Air Force submitted to the Secretary of Defense and the program which has your personal approval.

General WHITE. That is right.

Mr. FORD. Under the circumstances you do not feel that it would be wise to beef up the ATLAS or the TITAN program?

General WHITE. I cannot say that it would be vital to do so. I do say, and did say earlier to this committee, had circumstances been different, the environment different, we would have asked for more missiles. That is one of the reasons I say priorities given to the various systems were not met in full according to the way I would have put them. I can only say more weapons would be more insurance.

Mr. FORD. As I understand the testimony this morning in response to a question by Mr. Mahon, you indicated that in retrospect, as you look back the last 2, 3, or 4 years, the decisions made by the Air Force and the Department of Defense in the ICBM area have turned out to be correct, they were wise choices and wise decisions?

General WHITE. Yes.

At one time I said I thought we might have gone faster with the ICBM's had we been a little more certain of their success. I believe that is somewhere in the record.

Mr. FORD. Of course, in retrospect after you have been successful it is always a lot easier to say that.

General WHITE. You will always get a good deal of criticism for letting some system go ahead and then canceling out at some expense. Naturally, we were sensitive to that.

Mr. GARLOCK. Late last summer there was less enthusiasm for the ATLAS program than there is today.

Mr. FORD. At least a year ago it was going through the same kind of growing pains that TITAN is going through now.

Mr. GARLOCK. As recently as last summer there were five successive failures of the ATLAS program. The program has been eminently successful.

Mr. FORD. I thought I heard you say this morning, General White, something that appeared to be this—it was said during the time you were discussing with Mr. Mahon the problem of a bigger ICBM program—that there was opposition in the Joint Chiefs of Staff to go above the old ICBM program of 20 squadrons, 9 ATLAS and 11 TITAN. Am I correct in what I thought I heard you say?

General WHITE. Yes.

Mr. FORD. Was there a majority view in the Joint Chiefs of Staff in opposition to the ICBM program?

General WHITE. As I recall the last formal paper on this subject, it was last spring in connection with the formulation of this budget. I am sure the then Army Chief of Staff opposed to some degree any increase, and the Navy opposed any increase and recommended the cancellation of the TITAN program at that time.

Mr. MINSHALL. When was that?

General WHITE. Last spring. I think that is the only formal consideration given in writing.

Mr. FORD. In other words, it would appear then that the Air Force's program for a larger ICBM program prevailed? The Secretary of Defense and/or the Commander in Chief took the initiative and as a result we have a larger ICBM program.

General WHITE. The Secretary of Defense approved the Air Force program which was submitted of 27 squadrons.

Mr. FORD. Sometimes the minority prevails.

General WHITE. I think that is pretty nearly the whole subject of General Taylor's book.

AIRBORNE ALERT

Mr. FORD. The Secretary, I think, in his statement recommended continuation of the provisions in the existing defense appropriation bill authorizing airborne alert, even if it resulted in deficit financing?

Secretary SHARP. That is correct.

Mr. FORD. Do you feel that is a desirable provision in the fiscal 1961 Appropriation Act?

Secretary SHARP. Yes, I would think so. It seems to me the practical way to prepare for an eventuality that we are not sure is going to arise. I think it is a very sensible way.

Mr. FORD. Such a provision would give you the flexibility in an emergency situation if Congress were not in session?

Secretary SHARP. That is correct.

DECREASE IN AIR FORCE PERSONNEL

Mr. FORD. One of the witnesses, either General White or Secretary Sharp, indicated there had been a drop in Air Force personnel from the fiscal year 1957 of 920,000 to the fiscal year 1960 of 825,000.

Secretary SHARP. This year's budget goes down to 825,000.

Mr. FORD. That would be for the fiscal year 1961?

Secretary SHARP. Yes.

Mr. FORD. Could we have for the record information—and General Friedman can supply it—showing how our military personnel account has gone each year—and in this case I am sure it has gone up—despite the drop in personnel?

General FRIEDMAN. Yes, that is correct.

(The information requested follows:)

Comparison of military strength and military personnel appropriation

Fiscal year	Military strength		Military personnel appropriation, direct obligations
	End year	Man-years	
1957	919,835	914,362	$3,700,380,845
1958	871,156	891,756	3,830,747,889
1959	840,028	855,060	[1] 3,985,066,000
1960 (estimated)	825,000	830,037	3,987,000,000
1961 (estimated)	825,000	823,451	4,060,000,000

[1] Reflects 1st full year of increased cost for military pay increases authorized effective June 1, 1958 by Public Law 85-422.

Mr. FORD. This has resulted because Congress has had some pay increase legislation; they have added fringe benefits of one sort or the other, and the Air Force has taken advantage of the proficiency pay provision and the like.

I personally want to compliment the Air Force because even though we have had an increase in costs with a lower strength figure, it seems to me that the Air Force has been able to do its job as well, if not better.

The Marines have shown the same kind of result. I think that the Air Force should be complimented for better utilization and concrete evidence of how that utilization has improved as far as personnel is concerned. I do not think we mind paying more for something better as long as we get results.

General WHITE. I think that was the basic theme when the Cordiner bill came up. Although there were savings shown, the savings were really savings in increased efficiency.

Mr. MAHON. The committee will stand adjourned.

WEDNESDAY, JANUARY 27, 1960.

Mr. MAHON. The committee will please come to order.

I observed that Secretary Sharp is not here this morning. I am sure his absence is a result of his illness.

I want to say for the committee that I am very much gratified to observe in the morning Congressional Record that the other body has quickly confirmed Secretary Gates as Secretary of the Department of Defense, Mr. Douglas as Under Secretary, Mr. Lincoln as Assistant

Secretary of Defense (Comptroller), and Dr. Charyk as Under Secretary of the Air Force.

Dr. Charyk is present, and we are pleased, Dr. Charyk, that you have been confirmed. Of course, this was anticipated. We wish you every success in this highly important work which you are undertaking.

Dr. CHARYK. Your kind comments are very much appreciated.

Mr. MAHON. We will resume the hearings on the Defense budget.

When we were last in session the day before yesterday Mr. Ford was in the process of interrogating the witness.

You may proceed, Mr. Ford.

Mr. GARLOCK. Mr. Sharp has asked me to indicate to you that today he is sick with the flu and is unable to attend.

Any questions that the members of the committee may have he will be happy to answer in writing, or appear before the committee at a later date, as the committee may desire.

Mr. MAHON. I know he was not too well when he was last before us. We will follow the suggestion you have made with respect to procedure.

ATLAS–TITAN CONTROVERSY

Mr. FORD. General White, over the last several years there has been controversy, not only in the Pentagon but elsewhere, about whether or not we should have proceeded with the TITAN as well as the ATLAS in the ICBM category. It is my recollection in apparently November of 1958, a decision was made that the TITAN should be carried on in addition to the ATLAS.

Have any subsequent developments since that time changed your mind that that was a wise decision?

General WHITE. To date, none. As you know, we are having what we hope are normal difficulties in a new weapon system with the TITAN. I could not say if the system fails in retrospect it would not have been a very bad decision to have gone ahead with the TITAN, but based upon the very best technical advice we can get the TITAN should go, and on that basis there is no reason to regret, or feel the decision was not the wise one.

We were having the same difficulties with the ATLAS a little less than a year ago. I think there were five successive failures with the first production type of ATLAS missiles. Those particular weapons, because they were the first ones produced, had limited telemetry. As a result, it was very difficult to determine what the trouble was. We really had a shock. We were set back a bit. We have, however, come out in fine shape. We have fired now, I might say, 17 successive successful shots. We had two successful shots yesterday, one by the Strategic Air Command—its second operational firing from Vandenberg Air Force Base—and another special test at Cape Canaveral. As of 8:30 this morning both shots seem to have been fully successful.

Mr. FORD. In the proposed fiscal year 1961 budget you have increased the program for both ATLAS and TITAN. At the time that decision was made was there any further consideration given to the advisability of canceling TITAN, or holding down the program, and boosting, or further increasing the ATLAS program?

General WHITE. There was, sir. Before I get out of my depth, I would like to make a general statement about it and perhaps Dr. Charyk will take over for the technical details.

Of course, we looked at it. We looked at it from three points of view: The monetary consideration, the relative military value as between the systems, and thirdly, the time element in getting additional missiles squadrons. On balance, the reason originally for going on with the TITAN still obtains, plus the fact that some new developments have come in. The later TITAN squadrons will be able to use storable fuels, which I think would be a more expensive, if not an impossible task, to crank into the ATLAS in the same time period. On balance, the proper decision was, in order to speed the program to a considerable degree, to increase the ATLAS, but as soon as the TITAN schedule was picked up then add the additional squadrons in the TITAN program.

Mr. MINSHALL. The other day someone testified that one of the primary reasons for having the TITAN missile was that you needed a high-yield weapon. At the same time, they were not too consistent because they said they were only going to need a few high-yield weapons. Accordingly, why do you program TITAN on a 50–50 basis with the ATLAS?

General WHITE. I would simply say the high yeild available to the TITAN was a bonus. The high yield was not the determining factor. The high-yield application comes in a relative sense in both the ATLAS and the TITAN as compared to the MINUTEMAN, or for that matter, the POLARIS, where the warhead yield will be considerably less than for either the TITAN or ATLAS. It is certainly my thought that neither the ATLAS nor the TITAN is going to be a short-term weapon system even after the MINUTEMAN comes in and even after the POLARIS become operational. We will probably want to keep all the ATLAS and TITAN missiles simply because they do have a larger warhead, the TITAN having the larger of the two.

Mr. MINSHALL. Thank you very much.

General WHITE. The technical experts can enlighten you far more than I.

Mr. GARLOCK. One of our problems is, we keep calling them ATLAS missiles and TITAN missiles. There are substantial differences between the 1st squadron of the ATLAS and the 13th squadron, and there are substantial differences between the first several squadrons of TITAN and the last several squadrons. We ought to start calling them A, B, C, and D, as we do with the aircraft.

Mr. MAHON. Is it not true they both have considerable growth possibilities, and actually there is not much difference in the more sophisticated proposed versions of these missiles? Is it not also probably true we should probably have never, in hindsight, produced them both? That is one of the questions that I would like answered very sharply on the record at this point.

(The information will be included in a later volume of these hearings.)

Mr. FORD. Perhaps this question to Dr. Charyk will help: At the time this decision was made to increase both programs for the fiscal year 1961, what were the comparative benefits of the growth possibilities of each?

IN-SILO-LAUNCH CAPABILITY IMPORTANT

Dr. CHARYK. Actually, the consideration of the growth possibilities in the case of the two missiles, the cost comparisons and future applications of the two missiles, and potential boosters for space application were factors that were weighed in trying to determine the proper mix between the ATLAS and TITAN programs. In addition, a very important consideration was the logistic aspects of the problem. In the case of the TITAN it was determined that beginning with the seventh squadron it would be possible to introduce in a fairly simple and economical fashion certain improvements which we think are extremely important for the future military effectiveness of this weapon system. In particular the TITAN, starting with the seventh squadron, will incorporate an in-silo-launch capability. They can actually be fired out of the silo.

Mr. FORD. The TITAN?

Dr. CHARYK. The TITAN.

Mr. FORD. And the ATLAS does not have that potentiality?

Dr. CHARYK. The ATLAS is much more difficult to adapt to an in-silo-launch capability for several reasons. A minor difficulty, of course, is that it is a larger diameter missile. A more important factor is that the design of the ATLAS missile will involve the use of what are called balloon-type structures, essentially a very thin pressurized shell. When a missile is launched from a hole in the ground there are extreme heating problems and extremely severe vibration problems. The TITAN is built in a more conventional, more rugged fashion than the ATLAS. In addition, it has a smaller diameter, which makes it more adaptable to the in-silo-launch capability. We think this is extremely important because not only do you want to have the capability for the missile to survive a burst at fairly short range—which leads to hardening—but also you want the exposure time to be a minimum.

In the case of the improved TITAN which can be launched from in-silo and which can incorporate storable propellants, the reaction time and the exposure time are reduced to a minimum for a liquid-propelled missile. As a matter of fact, both the exposure and reaction times, we feel, will be less than ———.

The exposure time is a fairly important element when one considers various war game situations. If the missiles that are being directed against a target do not all arrive simultaneously, it is important that a missile, which is normally hard, be exposed a minimum period of time so it will be less susceptible to damage during the exposure period when it is getting ready to be fired.

Mr. FORD. I am sure that both the Air Force and the Department of Defense are convinced of the greater growth possibilities, or potentials, of the TITAN. You are reciting the reasons, I am sure, that convinced you of those decisions. Are those reasons as clear-cut and categorical as you are seeming to indicate? Is there some evidence the other way?

Dr. CHARYK. Well, I think that the kind of factors that I have been discussing are extremely important to the operational effectiveness of a large ballistic missile. I was going to add a very important one; namely, with the introduction of storables, and with the conservative design that is embodied in the TITAN, we can have considerable simplification in the propulsion system—for example, the number of valves being significantly reduced.

One of our biggest headaches in ballistic missile testing has been trouble in very minor components. Many of these troubles that occur in such things as valves are directly tied to the very low temperatures involved in the use of cryogenic propellants. These are eliminated in the case of the adaptation to storables, so we think the reliability of missiles will be greatly enhanced beyond what we think is even theoretically possible with cryogenic propellants where one is continuously fighting with problems allied with low temperatures.

And the significant proportion of the kind of problems we have been encountering in the early phasing of ballistic missile testing have been due to the very large number of valves and to the low temperature of operation, and so on.

In moving into the revamped TITAN program, our aim has been to simplify and streamline the design to produce the optimum reaction capability with optimum reliability. We think these are extremely important advantages when talking about a military weapons system.

Mr. FORD. Is it accurate to say—and I think this is the crux of the problem as far as I see it—in considering the increase in the ATLAS type of programs for the fiscal year 1961, you took the latest version of the TITAN and added on its growth potential and the latest potential of the ATLAS and added on its potential in arriving at your final decision?

Dr. CHARYK. We certainly compared the growth possible in the ATLAS, the time periods in which the various improvements could be incorporated, and in the last analysis we looked at the final product we would have and the comparative costs. On balance, considering all these factors, we came to a decision—the one that is reflected in the budget submission.

TITAN FAILURES DUE TO PERSONNEL ERRORS

Mr. FLOOD. On the question of TITAN and the recent failures, is it not a fact that you announced as a reason for the last failure mechanical failure in the valves? Is it not also true that these particular gadgets have nothing to do with the guidance or thrust or the propulsion whatsoever, and so they contribute neither one way nor the other to the reliability of the bird, the TITAN? And is it not also true that you have had utterly inexcusable and appalling errors of personnel judgment at the time of the transportation and countdowns for the last two shots—inexcusable, appalling errors of judgment of personnel which should never happen? Are not both of those things true as a fact?

Dr. CHARYK. I may say this, Mr. Flood, insofar as the TITAN is concerned, we have not encountered any difficulties which are due to the technical design of the missile proper. The last failure to which you made reference was actually the initiation of a destruct signal. The missile tankage was opened on the pad by reason of the destruct system being activated.

Mr. FLOOD. I know what happened. Time and again I encounter with your people this attitude—the operation was a complete success; the patient died.

Dr. CHARYK. I think that you would categorize the last TITAN as a complete failure.

Mr. FLOOD. Then both the operation and the patient died.

Dr. CHARYK. I would say the last attempt to fire the TITAN was a complete failure in the sense that the destruct system was activated on the pad and hence, essentially, none of the test objectives were fulfilled although, of course, information was gained as to limitations in the destruct system installation.

Mr. FLOOD. Will you comment about the inexcusable negligence on the part of your personnel? Do you know about it? I do.

Dr. CHARYK. There have been a series of incidents to which you are probably making reference in regard to the TITAN program. Some of these are not necessarily associated with actual operations at Canaveral, although, of course, certain difficulties of this type have also been encountered there.

Mr. FLOOD. I am talking about inexcusable and uncorrected—appalling negligence by people; and that should never happen.

Dr. CHARYK. There have certainly been human errors that have resulted in damage to certain missiles.

Mr. FLOOD. And your answer is "Yes"?

Dr. CHARYK. My answer is that there have been human errors which have had——

Mr. FLOOD. Do you not like to say "Yes"?

Dr. CHARYK. I was trying to be a little more precise.

Mr. FLOOD. You want to be more precise than "Yes"?

Extraordinary. Do that.

Dr. CHARYK. I wanted to define what I am responding "Yes" to.

Mr. FLOOD. Have you said "Yes"? Will you say "Yes"?

Mr. FORD. Now, Mr. Flood——

Dr. CHARYK. What is the question?

Mr. FLOOD. In this business you can say "Yes" and talk all morning, if the chairman will let you. Will you begin by saying that the answer is "Yes," and explain your answer?

Dr. CHARYK. With some qualifications.

Mr. FLOOD. Will you say "Yes" and explain why? Mr. Chairman, this is evasive and deliberately so, and I want the record to show that the witness is being evasive. I want him to say "Yes" or "No" and explain for the rest of the hour if he wishes.

Mr. MAHON. The witness has a right to express his views in whatever language he may choose. We will proceed.

Mr. FLOOD. I take exception to that course.

Dr. CHARYK. I wanted to say, Mr. Flood, certain of the things indicated in your question are certainly correct. Some of the difficulties have also been due to human errors. These incidents have resulted in an intensive review of the complete operations of the program, and some major modifications in procedures have been effected. Personnel changes have been made. Our recent indications are that many of the deficiencies which existed earlier have been removed.

Mr. FLOOD. Let us not take all of Mr. Ford's time. You explain that to your heart's content in whatever words you choose to use. I have heard something about this.

Mr. MAHON. Do you have a further comment?

Dr. CHARYK. Yes. I would like to clarify. I believe that one or two instances to which Mr. Flood may be making reference are cases where difficulties were encountered due to failure to follow procedures which had been set up. I would repeat that in other instances different reasons apply.

Mr. FLOOD. How very interesting.

Mr. MAHON. I wish you would put in the record at this point what the real facts are.

Mr. SIKES. And what action was taken in the case of the personnel who made these costly and inexcusable errors.

Mr. FLOOD. This attitude is not cooperative with this committee. He has been evasive. I see a plan to conceal. This should all have been volunteered a while ago.

Dr. CHARYK. I would simply like to say there is no intent to conceal. We are certainly happy to make all the information available. I have merely wanted to be factual, and I did not want the impression to be created that the difficulties in the majority of instances have been due to the factors mentioned by Mr. Flood. We shall be happy to provide a summary of the incidents involving significant damage to the missile and to indicate the reasons underlying the specific incidents.

Mr. MAHON. Let us have it please, and we will look at it.

(The information will be included in a later volume of these hearings.)

Dr. CHARYK. Very fine.

NEW OBLIGATIONAL AUTHORITY, 1955–60

Mr. FORD. A question, Mr. Chairman.

Could we have in the record the Air Force's budget, or the budget of the President for the Air Force, for the fiscal year 1955 up through 1960 in new obligational authority; the figure that was finally approved by the Congress for each year, and the difference, whether it is upward or downward. I do not know whether it was up or down each year. Show the total, plus or minus at the end for the 6-year program.

General FRIEDMAN. We will be happy to do that. Is that for both the ATLAS and TITAN?

Mr. FORD. I mean the whole Air Force budget, and include also in a separate table the same information for the military construction program.

General FRIEDMAN. We will be happy to do that, Mr. Ford.

(The information requested follows:)

Department of the Air Force new obligational authority, fiscal years 1955–60

NEW OBLIGATIONAL AUTHORITY EXCLUDING MILITARY CONSTRUCTION

[Thousands of dollars]

Fiscal year	President's budget [1]	New obligational authority approved by Congress	Difference
1955	11,206,000	10,933,930	−272,070
1956	14,789,678	14,773,863	−15,815
1957	15,678,500	16,486,400	+807,900
1958	16,871,000	16,345,181	−525,781
1959	17,761,654	17,972,677	+211,023
1960	17,767,200	17,472,706	−294,494
MILITARY CONSTRUCTION			
1955	945,997	630,000	−315,997
1956	945,000	739,291	−205,709
1957	871,000	1,228,000	+357,000
1958	1,520,000	1,420,000	−100,000
1959	1,001,500	794,600	−206,900
1960	915,000	797,273	−117,727
TOTAL AIR FORCE NEW OBLIGATIONAL AUTHORITY			
1955	12,151,997	11,563,930	−588,067
1956	15,734,678	15,513,154	−221,524
1957	16,549,500	17,714,400	+1,164,900
1958	18,391,000	17,765,181	−625,781
1959	18,763,154	18,767,277	+4,123
1960	18,682,200	18,269,979	−412,221

[1] As amended by House documents incorporating budget amendments.

Mr. MAHON. I think that this record ought to be as clear as possible. It is always possible to carry on a conversation as the result of a question. What we want is the best information that can be given. It is not always possible for a witness to be able to answer precisely a question that is asked. He just cannot have everything in his mind at one time. I asked you, General White, yesterday about the holdup on General Power's statement, and I read that later on. It is inconclusive. I do not know now about the holdup. I would like to ask that we place in the record at this point just how long the statement was held up, who held it up, and what the real facts are rather than the inconclusive statement on the record. I think there will be no problem in doing that.

(The information requested appears on p. 279.)

Mr. MAHON. Mr. Ostertag.

Mr. OSTERTAG. General White, we hold you in high regard and respect your able leadership of the Air Force and the great strides being made under that leadership.

BALANCE OF DEFENSE BUDGET

In connection with the budget and the overall picture, as I recall it, Secretary Gates and General Twining gave us the broad estimate that in the defense budget generally, $22 billion, or more than half of the $41 billion budgeted, goes in general for maintenance and personnel.

Recognizing the peculiarities of the Air Force, and particularly the weapons system and production aspects, would you say that the Air Force's budget is pretty much in balance with that overall figure of responsibility in cost?

General WHITE. That is approximately correct, sir.

Mr. OSTERTAG. Is there anything in your plans and programs which have taken into account a change in our economic status; that is, prices and costs? Do you find in your contracts and in your programing and in your procurement that costs are going up, or are they reasonably leveling off?

General WHITE. I believe that there is a continuous rise, Mr. Ostertag. General Bradley here, who is concerned directly with procurement, could give a much more accurate statement on that than I. Could we refer that question to him?

REASONS FOR INCREASES

Mr. OSTERTAG. Well, procurement is one of the big aspects of our Air Force budget, is it not?

General WHITE. It is perhaps the biggest overall.

General FRIEDMAN. Perhaps I might comment from an overall standpoint. First, as regards procurement, I believe General Bradley stated earlier in the record that there are some normal price increases. We are, however, also talking about more complex weapons. These two factors—normal price increases and more complex weapons—add to our costs. It is a little difficult to define which has the greatest impingement. In the other appropriation areas we find, on examination, that military personnel costs are up. That is one of the reasons that led the Air Force to a decision to attempt to hold our strengths relatively level; and, in fact, take some reduction in order that we might capitalize on the military pay raise that was given us and, at the same time, reduce operating expenses.

In the "Operation and maintenance account" we find the principal reasons for increase are largely in the area of civilian personnel salaries and recurring wage board increases. Additional costs are associated with an expanding communications system, an expanding air defense net, and expanding housing availability. Wherry housing, for instance, in 1961 will be going up from the order of about 41,000 to about 52,000 houses.

So, I think in all areas it is fair to say that while there certainly are some increases due to cost factors alone, there are also increases due to the growing complexity and scope of programs.

Mr. OSTERTAG. General White, as I understand it, Secretary Gates has adopted a new policy of sitting with the Chiefs of Staff on occasion with the idea of resolving certain problems and differences. To what extent this has been done prior to his administration I do not know, but do you find that that is a sound means by which we can get more directly to the solution of some of these questions and issues, and very helpful to the Chiefs themselves?

General WHITE. I concur completely. I think it is a very great step forward, and one I would like to see practiced regularly and frequently.

Mr. OSTERTAG. General White, in your statement on page 15 you refer to the absence of an active missile defense. That disturbs me, if I read it correctly. You are in substance saying we do not have an active missile defense?

General WHITE. That is correct.

Mr. OSTERTAG. You mean that we have no missiles operational today?

General WHITE. No. In that context I meant there is no active means to shoot down an incoming missile.

Mr. OSTERTAG. In other words, a defense against missiles?

General WHITE. A defense against ballistic missiles; yes.

Mr. OSTERTAG. You see, I read your language to mean active missile defense, and perhaps I was thinking in terms of offense rather than defense.

General WHITE. I can see standing by itself the language is confusing.

BALLISTIC MISSILE PROGRAMS

Mr. OSTERTAG. Much has been said about the missile defense and the developments that are taking place. I am particularly interested in the prospects of programs that tend to deal with mobility in the missile field, the mobile launchers and ultimate developments in that direction.

We have been talking about the ATLAS and the TITAN. Does the mobility factor rest entirely on the MINUTEMAN coming into being?

General WHITE. It does insofar as the Air Force ICBM program is concerned. Of course, the Navy's POLARIS is a mobile system.

Mr. OSTERTAG. In connection with the timetable of missile development, when will the TITAN be a partner to the ATLAS in an operational status as compared to when the MINUTEMAN will come into being?

General WHITE. There is a 2-year lag if the first TITAN is on schedule, as we hope it will be, and the first MINUTEMAN if it is on schedule, and we hope it will be.

Mr. OSTERTAG. Will the TITAN require supplementary or additional training with regard to its operation as compared with the ATLAS? Does it require specialized training such as different crews or squadrons?

General WHITE. Yes, but there is unquestionably a similarity in the general skill field. There will probably be a greater difference, I should say, between the technical requirements for a crew on an ATLAS and a TITAN than between the technical requirements between a fighter and bomber aircraft. I think there will be a greater difference. The field of skills in general will be similar. I am sure when we have both types of units in service there will be transfers of personnel between the two types of units with possibly either special training or on-the-job training when they move from one type to the other.

TITAN SCHEDULE

Mr. OSTERTAG. How about the sites for TITAN? Will they be ready when the TITAN is ready?

General WHITE. The schedule is in phase. Of course, the lead time in construction is the controlling factor. Incidentally, to add to what

Mr. Ford said, one of the points between the ATLAS and the TITAN today is the assumption that the TITAN program will prove successful. It is now too late to make a buildup in the ATLAS to compensate for the TITAN, therefore we are committed on going ahead with the TITAN.

Mr. ANDREWS. General, I read in this morning's paper that you had announced yesterday the location of four or six additional ATLAS sites. Will that complete your program for building ATLAS sites?

General WHITE. These four do complete the ATLAS program.

Mr. ANDREWS. Have you selected any sites for TITAN?

General WHITE. Yes; I am not sure just how many.

Mr. GARLOCK. We have several of the bases under construction. I will complete that for the record.

Mr. ANDREWS. Have you selected all the sites?

Mr. GARLOCK. Yes; we have announced the six sites for the first six squadrons.

(The information will be included in a later volume of these hearings.)

ICBM MOBILITY

Mr. OSTERTAG. Right along that line, but returning to the mobile aspects of missile operations, if and when missiles are developed that can be loaded on a mobile base such as a railroad car, is it conceivable that we will have available missiles in many sections of the United States?

General WHITE. I am sure our plans contemplate using all of our railroad trackage which is suitable, rangewise, and otherwise appropriate for the purpose. The actual firing sites will have varying considerations because they would not fire from a moving train, as we see it now, but from a benchmark. The missiles will be set down and cars stopped at a certain place where the location is accurately known. Those will undoubtedly have varying applications of terrain and possibly climate. We have considered population density and all that sort of thing.

Mr. OSTERTAG. I would like to refer again to this whole question of airpower, our striking power, which of course is mobile in many respects.

B–70 VERSUS AIR-LAUNCHED MISSILE

Now, if and when the B–70 is developed and made operational what, in your judgment, will it be able to do that a B–58 or a B–52 with a HOUND DOG or SKY BOLT cannot do? With an added ballistic missile with a range of 600 to 1,000 miles, is there any target which cannot be reached?

General WHITE. Yes; there are many targets that would be more than 1,000 miles from the initial defenses.

Mr. OSTERTAG. And the B–70 would reach them?

General WHITE. The B–70 could reach them; however, I will say this—any bomber that can carry the missile can take the target out if the target is one which can be destroyed with a warhead that can approach within 1,000 miles of the target. There are many targets deep in the interior of our potential enemy which are more than 1,000 miles from the enemy defenses. That being so, to reach them the

bomber must penetrate—even though it has the air-launched missile aboard. In addition to that, many of these targets probably require heavier yield than the warhead yield of the air-launched missile and thus require a bomb of greater megatons.

ADEQUACY OF COMMUNICATIONS

Mr. OSTERTAG. Just one more question, and that deals with communications.

General White, are you satisfied with our communications system as it now exists in Europe?

General WHITE. Well, in general, electronics have advanced to such a degree that there are more advanced systems, some of which we have in our program. In general we always need better communications. I would certainly not say that our communications are not minimally satisfactory now. We would like to have better, in all phases of our major communications requirements area.

Mr. OSTERTAG. Well, do you foresee strides toward improvement in overcoming the weaknesses that have appeared to exist today?

General WHITE. Yes. We have a number of systems that are covered by this budget. We feel, all things considered, that phase of our problem is adequately covered in this budget. There are many things that many commanders would like to have that are not in the program, however.

Mr. OSTERTAG. Thank you, General White.

Mr. MAHON. Mr. Minshall.

TURKISH BLACK MARKET CASE

Mr. MINSHALL. General, last fall it was my privilege to go as a committee member and visit various of your Air Force installations on the Continent—Spain and in Turkey. While we were in Turkey the situation that was very much on everybody's tongue was the fact that several GI's involved in black marketing activities were seized by the Turkish police. I believe they were Air Force personnel.

General WHITE. Yes. I believe most of those that you probably refer to were Air Force personnel.

Mr. MINSHALL. I wonder if you could tell me, please, what the present status of that case is?

General WHITE. As I recall, it is something that is in the hands of the State Department. We are being very careful in our relationship with the Turkish Government on this particular case. The details I am unable to furnish, but I am sure they are readily available and I will be glad to submit them for the record.

Mr. MINSHALL. If you will, I will appreciate it.

General WHITE. I will, sir.

(The requested information follows:)

On August 3 and 4, 1959, four U.S. servicemen, T. Sgt. James D. King, S. Sgt. Joseph Proietti, and S. Sgt. Giacomo Recuvuto of the Air Force and Sgt. Dale M. McCuistion of the Army, were arrested and subsequently charged by Turkish authorities for alleged violations of Turkish currency laws. Since these alleged offenses are unrelated to the official duties of the four accused, the Turkish authorities have the primary right to exercise jurisdiction under article VII of the NATO Status of Forces Agreement. The United States requested jurisdiction but Turkish authorities refused to waive their right to jurisdiction over

the four servicemen. Turkish counsel for the four accused were retained at the expense of the United States under the provisions of Public Law 777, 84th Congress.

The trial has been in progress since August 1959 and has not yet been concluded. To date 11 hearings have been held. The next hearing is scheduled for February 3, 1960. On October 28, 1959, three of the servicemen were released on bail by the Turkish authorities. The fourth was released on November 14, 1959. All four servicemen are presently on duty with their respective organizations.

Two of the servicemen presently on trial have charged that shortly after their arrest they were subjected to brutality at the hands of the Turkish police. As a result of these allegations of mistreatment, three Turkish policemen are presently being tried in a Turkish court on brutality charges. Seven hearings have been held in the case of the Turkish police. The next hearing is scheduled for February 5, 1960.

STATUS OF BOMARC PROGRAM

Mr. MINSHALL. A year ago I was in the forefront, General, as you probably remember, on the BOMARC dispute we had before the Congress when the appropriation bill was considered. I want to say at the outset here today that my motivations were prompted by no other person's thoughts except my own: I had no particular ax to grind at that time in thinking that our BOMARC program should be dropped. Along that line, I would like to ask you several questions today about it.

First, as compared to a year ago, what is the status of our BOMARC program?

General WHITE. It has been considerably cut back, sir. The Department of Defense's master air defense plan, which was approved and began to be implemented less than a year ago, reduced the BOMARC program as well as the NIKE-HERCULES program. I do not have figures in my mind, but I am sure that we have people here who could give you the exact cutback.

Mr. MINSHALL. Could we have the figures put in the record at this point? We can have them now if you have them available.

General WEBSTER. In our previous program a year ago we were talking about a total program of some 32 sites. It has since been cut by the master air defense plan to 16 providing perimeter defense only. Our current program shows the 16 sites. There are two in Canada.

Mr. MINSHALL. How many sites are actually in being now, and when were they placed in being?

General WEBSTER. There are two in being right now.

Mr. MINSHALL. Where are they located?

General WEBSTER. At McGuire and Suffolk.

Mr. MINSHALL. Are they completely operational?

General WEBSTER. They have some BOMARCs ready, but they are not fully operational.

Mr. MINSHALL. What do you mean by "some"?

General WEBSTER. The unit equipment is 30 per site, with 28 launchers. They have a few BOMARCs ready to fire.

Mr. MINSHALL. These are BOMARC A, the old version?

General WEBSTER. That is correct.

Mr. MINSHALL. How many are ready? You say that you should have 28. How many are on site now?

General WEBSTER. I do not have the exact figures today.

Mr. MINSHALL. Does anyone here have the figures?

General BRADLEY. As of today we do not have the exact figures here, but we can supply them.

General WEBSTER. I am told that on the first of the month there were ——— missiles on alert.

Mr. MINSHALL. These are BOMARC A missiles?

General WEBSTER. That is correct, sir.

Mr. MINSHALL. When will you have the first BOMARC B missile ready on site?

General WEBSTER. The BOMARC B schedule—the first site is scheduled to become operational ———.

Mr. FORD. If the gentleman would yield, out of the — how many are going to be BOMARC A and how many will be BOMARC B?

General WEBSTER. The program contemplates now, Mr. Ford, there will be ——— A sites initially and ——— of these will have ——— A and ——— B missiles, so there will be a mixture at these sites.

Mr. MINSHALL. As to your testing program, it has been brought out here today that some of your facts and figures on the TITAN missile program were a little bit lax. I just hope your figures on the testing program for the BOMARC are not quite as lax. I wonder specifically, first off, is BOMARC effective against supersonic targets?

BOMARC EFFECTIVENESS

General WHITE. Yes.

Mr. MINSHALL. What is your test record on BOMARC A against supersonic missiles?

Dr. CHARYK. There have been, I believe, of the order of 10 flights that have been against supersonic targets. I would describe one of these, against a REGULUS, as being completely successful.

Mr. MINSHALL. What is your percentage of kill with BOMARC A? Do you mean that only 1 out of 10 has been successful?

Dr. CHARYK. The number is five against REGULUS and one I would describe as completely successful. In one case there is considerable uncertainty as to the details, and in three cases there has been a destruct on the missile.

Mr. MINSHALL. How can we rely on BOMARC A to be anywhere near effective against enemy bombers coming in at supersonic speed over McGuire or wherever the other bases are located, if your test records are not any better than that?

Dr. CHARYK. I think, first of all, there is of course a difference between a REGULUS and a supersonic bomber. The REGULUS is a much more difficult target because it is a small object and has a small radar cross section. That is the important difference.

General WHITE. May I step in? I think it important to point out that there have not been all of the supersonic tests we would like to have, and plan to have. Actually, the Soviets at the moment have no supersonic bombers in their inventory, and we would expect to have the tests completed and the ability to knock out supersonic bombers by the time they are in the inventory, but at the moment there are none.

Mr. MINSHALL. What is your percentage of kill against the subsonic bombers?

General WHITE. It is fairly high.

Mr. MINSHALL. "Fairly" is an awful broad term. I wonder if we could have more exact figures.

General WHITE. I know we have a good program because I have seen in the last couple of months a complete rundown of every BOMARC A that we have fired together with results. I consider it quite satisfactory.

Mr. MINSHALL. I am not trying to be argumentative about this. I am being provocative to a degree to find out. The program has been in being since 1952. We have spent billions to date and I feel that if we do not have an effective weapons system we should know it.

General WHITE. I feel that the BOMARC A is an effective weapon against subsonic weapons. We have not completed our tests on the supersonic targets. We do have a complete rundown of every BOMARC A firing, together with the results, and they are generally pretty good.

BOMARC "A" NOT PROVEN SUCCESSFUL AGAINST SUPERSONIC TARGETS

Mr. MINSHALL. Then, for all practical purposes, it is fair to state that BOMARC A has not proven itself against supersonic targets?

General WHITE. I think that is generally a fair statement, if you would add, "as of now," sir.

Mr. MINSHALL. Well, what future tests do you plan to have with it? It is out of production. It is presumably going on site in a limited number. How are you going to prove it out?

General WHITE. Through the BOMARC-B, for one thing. We will get the technique in using them against supersonic targets.

General BRADLEY. The BOMARC-A is not out of production yet. It is still in production and they are still continuing some tests.

Mr. MINSHALL. How much more production do you have on the BOMARC-A?

General BRADLEY. We have to fill up the sites we have, so it will be quite a while yet.

Mr. MINSHALL. What is the point of filling up the sites if it is not going to be effective against supersonic bombers?

General BRADLEY. It is going to be effective. We have hit a supersonic target with a BOMARC-A, so it is not completely ineffective at all. We have not run enough tests against supersonic targets yet to say that it is completely unsatisfactory.

Mr. MINSHALL. That must have been a lucky shot. You have shot many times and hit only one supersonic bird, and with all of the tests conducted it seems to me you have a very low kill average.

General BRADLEY. We are not satisfied with the BOMARC-A as to its effectiveness yet. We have a very intensive program right now at Eglin Field running further tests on the A missile.

COST OF BOMARC-A

Mr. MINSHALL. Do you know how much the BOMARC-A program has cost to date?

General BRADLEY. I do not have the figures here, sir. I know it is quite a bit.

Mr. MINSHALL. Can anybody give us how much we have spent on BOMARC-A and will have spent on the entire program?

General FRIEDMAN. On procurement, as I see it, it would be on the order, for the A alone through 1959, about $1 billion, roughly.

Mr. FLOOD. Will the gentleman yield?

My information was last year from the Air Force that by the end of 1960 fiscal year you will have spent $2.5 billion on BOMARC, and that does not include any assignments or allocations which should be made to the SAGE system against BOMARC. In addition to the $2.5 billion by the end of the fiscal year 1960, you must allocate your contribution to the SAGE system for which BOMARC must be charged.

Mr. MINSHALL. How much would you allocate against the SAGE program for BOMARC?

General FRIEDMAN. I do not think we justifiably can do that, Mr. Minshall. SAGE is a system designed to integrate and correlate the entire ground-air defense complex as well as the missiles and the fighters. I just do not believe that any attempt to distribute the cost of SAGE to BOMARC would be meaningful. It would have to be extremely arbitrary and I would not be prepared to justify any such distribution.

Mr. FORD. Whether you have BOMARC or additional manned interceptors, you would have to have one or the other, SAGE would have to be operational, so you cannot allocate a part of SAGE to BOMARC or to the alternative, additional manned interceptors. You would have to allocate a part of that to additional interceptors if they replaced BOMARC.

Mr. FLOOD. We have always followed that practice, Mr. Chairman, and the allocation of funds against strategic weapon systems. I begin with the greatest of them all, SAC, and it has always been the practice to allocate everything from a gasoline installation to the length of a runway to the hangars, airframes and personnel, to O. & M. against the SAC system. This is merely another weapons system, and you should therefore allocate BOMARC some kind of reasonable share of the SAGE system. The practice is analogous.

Mr. FORD. Would you say then it is logical to assign a part of the NIKE-HERCULES cost to the SAGE system also?

Mr. FLOOD. If it is a part of the system, of course. I am not talking about NIKE. If it is sauce for the goose it is sauce for the gander. I was not aware that the NIKE system was tied into SAGE.

Mr. FORD. It is.

General WHITE. It is essential to it.

Mr. FLOOD. NIKE-HERCULES, but we had AJAX going without SAGE on point-to-point defense. I am seriously concerned about the proper ack-ack defense for SAC bases. I do not think it is adequate. I do not think that BOMARC is the answer. I am seriously concerned about ground-to-air defense for our SAC installations. I think it is totally inadequate.

Mr. MAHON. The record of the last few minutes is typical of many portions of our record, a lot of inconclusive and indefinite statements appearing. Members of the committee who wish to read the regular record or the confidential record will not be able to find out the facts. The real facts are not yet in the record.

Mr. MINSHALL. General Friedman started to answer how much BOMARC has cost to date.

Mr. MAHON. Let us find out how much has been spent, how much has been appropriated. Let us have the figure here.

Mr. MINSHALL. Also include how effective BOMARC is today against air attack.

Mr. TABER. Do you not want to know what they have to spend in the future?

General FRIEDMAN. I do not have the cumulative figure.

Mr. MAHON. You may sharpen it up for the record.

General FRIEDMAN. I will first give the total costs through the fiscal year 1960 program, and then the fiscal year 1961 program as it is currently contemplated. I am going to cover the total cost to include research, development and evaluation; development, test and evaluation; procurement for service use, industrial facilities, development facilities, operational and other facilities to include all construction cost, the annual operation and maintenance and military personnel costs as we currently determine they will be allocated.

For fiscal year 1957 and prior, $728.8 million; fiscal year 1958, $427.1 million; fiscal year 1959, $664.4 million; fiscal year 1960, $409.1 million; in the fiscal year 1961 budget for all items of cost which I previously enumerated, we estimate $445.6 million. As for the estimates through fiscal year 1960, I believe Mr. Flood is correct as regards the figures that were given at that time. However, there were, as was indicated previously, some rather drastic reductions in the BOMARC program. This accounts for some of the change. Also the operating costs, with the reduced program, will be lower through the period. There would not be a direct reconciliation of cost data.

However, I think on total the figures presented here could be very closely correlated to those we gave last year.

Mr. MINSHALL. You have given a breakdown fiscal year by fiscal year, but what is the total spent to date since the inception of the BOMARC program in billions of dollars?

General FRIEDMAN. Sir, I would have to actually go back and examine the status of the contracts and deliveries against those contracts. I do not have that with me, but I would be very pleased to put it in the record; when we reappear, I could have the figure. I do not have that with me.

Mr. MINSHALL. How much is in the fiscal budget for BOMARC for this year?

General FRIEDMAN. For this year $445.6 million. I can give you the break on that in procurement, which is probably a figure which would be more meaningful. In the fiscal year 1961 budget for the BOMARC-B we propose a procurement of ——— weapons at a cost of $421.5 million.

Mr. MINSHALL. How much will it take to totally fund the entire BOMARC program to its completion, how much more money than is presently programed?

General FRIEDMAN. Unless a decision is made about December 1, 1960, I believe, there would be no further procurement of the BOMARC-B missile. In other words, the 1961 funds would complete the B-missile procurement. The Air Force forward planning contemplates proceeding to a second go-round to raise the unit equip-

ment—number of missiles per site. That decision has not been approved. That is in our forward planning.

So if we were to stay on the basis of the program as currently approved, there would be no additional cost except for followon spares, and operation and maintenance of the sites then in existence. If we were to go on to the higher UE program, a rough estimate of that would be approximately $450 million of procurement in fiscal year 1962 and an additional $10 million in fiscal year 1963 to complete the entire setup. As I say, that latter plan is not approved and a decision will not be made until well into fiscal year 1961.

Mr. MINSHALL. In round figures, exclusive of the SAGE feature of the program, the BOMARC program will have cost a round figure of about $3 billion?

General FRIEDMAN. Slightly more than that, including operating costs, I would say probably closer to $4 billion. Recognize, however, that operating costs are cumulative through fiscal year 1963.

Mr. FLOOD. Will the gentleman yield?

Mr. MINSHALL. Yes.

Mr. FLOOD. That is $4 billion, as I understand it, at the end of fiscal year 1963, which is the middle of calendar 1963, and I direct your attention to the potential of Soviet Russia with ICBM missiles on July 1, 1963, when your $4 billion BOMARC program is operational.

Mr. MINSHALL. Even today I do not think it is effective against the HOUND DOG type missile, which I suppose we can assume the Russians have.

(Statement off the record.)

Mr. MINSHALL. They have a similar type missile, do they not?

General WHITE. We believe it is a similar type.

Mr. MAHON. Will you clarify the figures you have recently given at this point to make them a little more accurate after you have checked with your records.

General FRIEDMAN. I will do that.

(The information will be included in a later volume of these hearings.)

BOMARC-B TESTING PROGRAM

Mr. MINSHALL. What is the present state of your testing program, Dr. Charyk, for the BOMARC-B program? You stated the other day you were having some kind of valve trouble and I wondered if that had been corrected as yet.

Dr. CHARYK. We will have better information on that after the next flight which incorporates the fixes.

Mr. MINSHALL. When is your next flight scheduled?

Dr. CHARYK. I believe it is scheduled within a matter of days.

General WHITE. That is correct.

Mr. MINSHALL. When was your last flight?

Dr. CHARYK. I think October of last year. We have had in the interim some flights with the X–7 test vehicle, but the last BOMARC-B was October of last year.

Mr. MINSHALL. You have had no complete successful firing of the BOMARC-B missile to date?

Dr. CHARYK. That is correct.

Mr. ANDREWS. Will the gentleman yield?

Mr. MINSHALL. Yes.

EXPENDITURES FOR SAGE PROGRAM

Mr. ANDREWS. General Friedman, can you tell us the total amount spent on the SAGE system to date?

Mr. MAHON. Obligated or provided?

Mr. ANDREWS. That is right.

General FRIEDMAN. You really mean spent rather than programed, sir. I am afraid I could not give you an expenditure figure, but I can give you a pretty good rundown on program and perhaps obligations.

Mr. ANDREWS. We have the round figure of $4 billion for the BOMARC program.

General FRIEDMAN. As I recall the figure through to completion on SAGE, I think we are talking about $3.1 billion.

Mr. ANDREWS. You can put it in the record, but isn't it around $3 billion-plus?

General FRIEDMAN. The figure that sticks in my mind is about $3.1 billion.

Mr. ANDREWS. Have you finished the program?

General Friedman. No, sir; I do not believe we will be through insofar as completing the SAGE centers fundingwise for the construction and the computer equipment. That will be probably completed in fiscal year 1962 or 1963 budget. I will make it specific for the record.

Mr. ANDREWS. Give also the anticipated cost to complete the SAGE program.

General FRIEDMAN. I will do that, sir.

(The information to be supplied follows:)

Sage programed costs for procurement and construction

[In millions]

1. AMOUNTS PROGRAMED THROUGH FISCAL YEAR 1961 BUDGET

	Fiscal year 1959 and prior	Fiscal year 1960	Fiscal year 1961	Total
Procurement	$1,002.8	$236.3	$209.5	$1,448.6
Construction	163.9	54.3	29.7	247.9
Total	1,166.7	290.6	239.2	1,696.5

2. ANTICIPATED COST ESTIMATES TO COMPLETE THE SAGE PROGRAM

	Fiscal year 1962	Fiscal year 1963	Fiscal year 1964	Total
Procurement	$124.7	$64.9	$44.5	$234.1
Construction	0	0	0	0
Total	124.7	64.9	44.5	234.1
Grand total, procurement and construction				1,930.6

The above totals do not include any amounts applicable to "Operation and maintenance" or "Military personnel" appropriations.

If these two appropriations were included, the total amounts programed through the fiscal year 1961 budget would be $2,186 million, and the total cost estimate from fiscal year 1959 and prior through fiscal year 1965 would be $3,439 million.

Mr. ANDREWS. What need would you have for the SAGE program if you abandoned your BOMARC program?

General WHITE. The SAGE system is required to integrate defense against any air-breathing threat that we have to include the manned interceptor or the BOMARC.

Mr. ANDREWS. But the primary purpose of the SAGE system is to implement the BOMARC program?

General WHITE. No, sir. I would put it the other way around, that BOMARC depends on the SAGE to be effective, but the SAGE would be required for the air defense system, in any case.

Mr. ANDREWS. Also, General, would you put in the record the cost of maintenance and operation of the SAGE system at the present time and what that cost will be when completed.

(The information to be supplied follows:)

OPERATION AND MAINTENANCE COST FOR SAGE SYSTEM

The operation and maintenance cost for the SAGE system in fiscal year 1960 is estimated at $114.2 million.

In fiscal year 1961, it is estimated to increase to $157.4 million and to level off at approximately a quarter of a billion dollars for the complete operational SAGE system in fiscal year 1965.

Mr. MINSHALL. At this point in the record it should be noted that these costs do not include the hardening of the electronic computer centers for SAGE; is that correct?

General FRIEDMAN. In the $3.1 billion, if I am not mistaken, that did envisage a certain number of supercombat centers. I have the figures before me now. The figures through to completion on this program, on the SAGE direction and combat centers—the current program through to completion would be $1.3 billion. The super-SAGE program would be on the order of $897.5 million. That would be through to completion. It was $2.1 billion, roughly rather than the $3.1 billion which I indicated earlier.

Mr. MINSHALL. For the record, BOMARC-A and BOMARC-B are both completely dependent on the SAGE system, are they not?

General WHITE. That is correct, sir.

Mr. MAHON. No abler officer appears before this committee than you, General Friedman. When you get the transcript, make sure the loose ends are taken care of and the record is made as clear as possible.

General FRIEDMAN. I will do that.

Mr. SIKES. On the subject of BOMARC, the theme of the hearing this morning is that the BOMARC system is essentially disappointing. BOMARC–A has limitations which apparently will soon make it of little value as a weapon. The testimony on the test program of BOMARC–B to date has been unfavorable. We have a very large investment in the BOMARC system and I have been one of its defenders.

I would like the record to show whether the testimony indicates the Air Force has lost confidence in the weapon or whether the Air Force still believes this is an essential part of our defense program and, if so, why.

General WHITE. We still believe it is an essential part, Mr. Sikes, and we base that not only on the Air Staff evaluation but that of the commander in chief of Norad—North American Air Defense—who

has stated that BOMARC is the backbone of his air defense as of today and must be concluded.

Granted that with the cutback there is a lesser capability than he asked for, because we now merely have a perimeter defense program instead of a defense in depth. That gives the commander in chief Norad some qualms, but it is still the major program against the air-breathing threat.

On that basis we have no further manned fighter-interceptors in our program as of this year, there is no follow-on to the F–106, which is the latest aircraft in that field.

Mr. SIKES. If that is the case, do you feel you can overcome the deficiencies which have shown up in BOMARC–B, and in your answer would you please tell us precisely what those deficiencies are and whether the entire weapon is affected or possibly only a minor part of the weapon.

General WHITE. I can say from where I sit that I am confident the program will work out, but the technical aspects of it I would like to turn to the Under Secretary of the Air Force, if I may.

Mr. SIKES. Very well.

Dr. CHARYK. The basic difficulties appear to be in certain components, accessory components of the engine. I believe that some of these have been traced to materials used in the manufacture. There is confidence that the difficulties have been corrected as a result of the successful X–7 flight with the engine that I referred to earlier. But, as I also indicated, we will have a better reading on this after the next flight, which is scheduled in the next few days.

Mr. SIKES. Can you tell us about the X–7 as compared to the BOMARC?

Dr. CHARYK. The X–7 is a test vehicle for the ramjet engine launched from a B–52 and can cover most of the flight envelope that the BOMARC will use.

Mr. FORD. Mr. Chairman.

Mr. MAHON. Mr. Ford.

Mr. FORD. Do you consider that the BOMARC–A and the BOMARC–B programs are essentially on schedule?

General WHITE. I would say they have slipped some, sir. I would like to check with our programer, but that is my impression.

General WEBSTER. They have slipped as far as the operational date with the total number of missiles. The B program has not slipped recently. We are still, as we were a year ago, calling for an operational date in ———.

Mr. MAHON. Will you please tabulate the slips since the inception?

(The information will be included in a later volume of these hearings.)

Mr. FORD. There has been some reference to the SAGE system. In your prepared statement, General White, you indicated 13 SAGE sites, 2 control centers, and 11 SAGE direction centers now in operation. What is the total number envisaged in this program?

General WHITE. It is now under study for some revisions, Mr. Ford. I will have to refer to my papers here or ask one of the programers to check it for me.

General FRIEDMAN. I have it. I believe the fiscal year 1960 program provides for the completion—I will go through construction and otherwise—completion and excavation of three supercombat centers

which were started in the fiscal year 1960 program, the completion and procurement of the three solid state computers, plus the associated equipment supporting the direction center and the supercombat centers.

General WHITE. I can give you the complete program, sir. Twenty-two direction centers and eight supercombat centers is the program.

Mr. FORD. That is the program we have before us at the present time?

General FRIEDMAN. That is the total program and with what I gave you is——

Mr. FORD. That is the total program you have decided on at the present time?

General FRIEDMAN. That is right, sir, and the figures I gave you are what is contemplated, procurement and constructionwise in the 1961 budget.

SAGE PROGRAM SLIPPAGE

Mr. FORD. Is the SAGE program on schedule?

General WHITE. I feel certain that is on schedule. We were scheduled to have——

General FRIEDMAN. I believe it is, Mr. Ford. However, if we were to go back to our previous plans, we would not find it on schedule. One of the reasons for that is a complete reorientation of the program under the revised air defense plan last year. There was considerable study going on, and during the period of that study there were stop orders or holds on contracts pending a final decision. Other than that, insofar as I know, there has been no delay.

Mr. MAHON. When you talk about being on schedule, if you revise your schedule every day, you will be on schedule every day. What we want to do is check back from the beginning of the SAGE program to date and have you give us the facts as to what the schedule has been. It has slipped, and we know it, but let us put it in the record.

General WHITE. There was a complete re-do of the program as a result of the master air defense plan.

Mr. MAHON. Yes.

(The information will be included in a later volume of these hearings.)

Mr. FORD. Is the NIKE system a part of the SAGE program?

General WHITE. Only indirectly, sir. It is integrated with it, but they tie it in through their missile master system but it does have a tie-in with the SAGE.

Mr. FORD. The NIKE system is tied into the missile master ssytem?

General WHITE. Yes.

Mr. FORD. The missile master system is tied into the SAGE system?

General WHITE. Yes.

Mr. FORD. That is the way it operates?

General WHITE. Yes, sir.

Mr. FORD. That is all.

Mr. MAHON. Mr. Weaver.

Mr. WEAVER. General White, on page 3 of your statement you make the following statement:

> The Soviet Air Force is the U.S.S.R.'s most dangerous weapon.

How long do you feel you can rely upon that statement, considering the growth potential of the ICBM's and IRBM's of the Russians?

General WHITE. I said the aerospace threat, and within that term, aerospace, I include manned aircraft, unmanned vehicles, as well as the ICBM's and IRBM's, sir. Therefore, I think that type of threat will continue from here on out to be the major military threat against us.

Mr. WEAVER. In other words, whenever you refer to the Soviet Air Force, you are referring to the missiles which would complement that force.

General WHITE. Yes, sir.

Mr. WEAVER. On page 6 of your statement you point out the accuracy of one of our missiles coming within ——— of the predesignated impact point. I would like to know why the classification of "Secret" is placed on that.

In other words, it would seem to me that that in itself would amount to a deterrent effect to any possible aggressor as to what we could do in the way of accuracy with our missiles.

General WHITE. I think that a precise statement of this nature would be of value to the enemy to know that our accuracy has been, in this instance at least, as great as indicated.

Mr. WEAVER. Would it not be a deterrent effect to him also?

General WHITE. I agree with that, sir, and have attempted on a number of occasions to have the accuracy of the ATLAS declassified for two reasons: (1) I think it does have a deterrent effect, and (2) I have the impression that people in this country are somewhat perturbed about our capabilities, and I think it would be very good for the public to know what actually is the status in that respect.

Mr. WEAVER. On page 9, at the top of the page, you say:

> These forces, in conjunction with the other services and the forces of our allies, contain substantial strength to deter or successfully counter limited aggression under most circumstances.

My question is: What circumstances do you envisage where they could not counter limited aggression?

General WHITE. What I had in mind there was in the certain circumstances where general war was immediately threatened and we would have to go into a general war posture and the limited war would then cease to be the main show.

Mr. WEAVER. General White, what information do we have about the Russians' missile warning systems and the absence or presence of an active missile defense?

General WHITE. I particularly inquired into both subjects within the last few days, sir. Off the record.

(Statement off the record.)

ICBM OPERATIONAL DATES

Mr. WEAVER. In regard to TITAN becoming operational, you have stated several times that certain problems have come up and that they are similar to ones that came up during the growth of ATLAS. It was my thought from the hearings last year that in pushing forward on the TITAN program many of these problems would not arise because of the fact that they would be a follow-on, naturally, from the growth of the ATLAS. Do you have a comment?

General WHITE. I am not competent to give you a good answer to that, but I am sure Dr. Charyk can.

Mr. WEAVER. Yes, sir.

Dr. CHARYK. I think there are so many areas in which difficulties arise that we have learned from the ATLAS experience, but obviously we have not anticipated all the problems because we have encountered some new ones in the case of TITAN but not in regard to the missile itself. It has to do with accessory equipment primarily.

General WHITE. I might make an analogy. I admit my technical ignorance, but the history of aircraft has shown us over the years that almost every new aircraft has difficulties and the complexity of a missile is much greater than that of an aircraft. Therefore, I had not thought there was anything unexpected about the fact that, even though the ATLAS had gone through a successful development phase, the TITAN also encountered its share of difficulties in the same process.

Mr. WEAVER. If I could call to your attention, General White, in 1958 before the Senate Preparedness Investigating Committee, Mr. J. H. Kindelberger, chairman of North American Aviation, had this to say:

> I think it is going to be a long, long time before we have what I consider dependable, reliable missiles. I am talking about the ballistic area. They are intricate beyond human belief. They have not been developed. If we take an airplane of equivalent complexity, we think nothing of spending 2 or 3 years after it is built getting all the bugs out of it. These are comparatively new things we are dealing with. There is a great difference, in my mind, between ready operational missiles and something that you count down for 10 hours and then start working on again tomorrow and maybe the next day and a week later you fly it. When I say "ready," I mean when you push the button it goes.

Would you have any comments on that statement?

General WHITE. I think I would agree with everything that he said except that I am quite sure that his pessimism about the future of the missile is in error. I have a schizophrenic position in which I have to deal with both aircraft and missiles. I think there is a future for both of them. Mr. Kindelberger is much more technically educated than I am; but, after all, his major interest was then in the manned aircraft field.

Mr. WEAVER. Concerning the schedule on MINUTEMAN, will any of the MINUTEMAN missiles become operational before the last TITAN is in place?

General WHITE. I believe that is true; the first ones will come in before the last TITANs come in.

Mr. WEAVER. Could you tell me about how many?

General WHITE. We have a schedule here we can give.

General BRADLEY. The first operational MINUTEMAN squadron will come in calendar 1963, and the last TITANs will come in after that.

Mr. WEAVER. Do you foresee any possible change in your schedule on TITAN where you may want to not continue the end phase of TITAN and go ahead with MINUTEMAN? In other words, MINUTEMAN is the ultimate you were referring to as far as propellant load and mobility.

General WHITE. With this caveat, which is always one we must be aware of. The MINUTEMAN program itself may slip. We hope

it will not because it is probably the most important weapon system this Nation has ahead of it. But should the MINUTEMAN show in the next several months a decided tendency to slip, then I think we would probably go on with maybe more ATLAS and more TITANS because the ballistic missile field is a very important one in which we need quantities of missiles.

Mr. WEAVER. Is there anything today that gives you the feeling that MINUTEMAN may be slipping as far as its stage of development?

General WHITE. No, sir; only that it is a new concept, in that we are using the solid propellant and the very thin cases that have to be lightened as much as possible in order to go the range. It is a highly difficult process. As of now, we are very encouraged with the test results to date.

Mr. WEAVER. Last year when I was at BMD they stated they liked solids better than storables because of the fact that the storables were highly toxic. However, at China Lake one of the scientists there expressed considerable interest in the potential of storable liquids. How does the Air Force rate storable fuels against solid fuels for future missile requirements? Why do we need both?

General WHITE. Doctor, would you take that one, please, sir?

Dr. CHARYK. Actually, the history of liquid propellants versus solid propellants has been a very interesting one in the sense that liquid propellants have appeared to have the higher performance capability. The solid propellants have had the advantage of simplicity. One has been in the ascendency in one period of time, then an advance is made in the other and that takes a dominant role.

We are inclined to feel that at the moment there is a higher performance potential in liquid propellants. On the other hand, we do have a vigorous program on high-energy solid propellants and it is quite conceivable that out of this program will come new solid propellants that can match anything we can do with the storable liquids.

HOUSING

Mr. WEAVER. I have a question here that I prepared for the Secretary but perhaps in his absence Mr. Garlock can answer it. At one point in the Secretary's statement he mentioned personnel housing. I am assuming from that statement he was speaking of Capehart housing. My question is:

Would it not save money and perhaps provide better housing near base if this could be left up to private industry? In this instance I am referring specifically to Offutt Air Force Base near Omaha where there are plenty of private interests that want to carry on in a private enterprise way, but the Air Force continually comes in seeking more units when some that were authorized some several years ago—and I believe that is a correct statement—have not even gotten started.

Mr. GARLOCK. I would prefer to supply an answer for the record on that. As you know, they go through FHA, get certifications that the housing is required, and just exactly what their arrangements are for screening availability of private builders, I do not know.

(The information to be supplied follows:)

OFFUTT AIR FORCE BASE HOUSING

Where private industry demonstrates capability and willingness to provide adequate and sufficient family housing within reasonable commuting distances, it is certainly more economical to rely on this source to satisfy military housing requirements. It is Air Force policy that this factor be thoroughly investigated before any program is developed for the construction of family housing. Before the Air Force can proceed with housing programs the Federal Housing Administration must confirm the need and determine that the housing assets in the community in conjunction with estimated economical growth will not satisfy Air Force housing requirements.

Offutt Air Force Base is the headquarters for the Strategic Air Command. As a major air command headquarters there is a greater concentration of personnel with families creating a higher requirement for housing in relation to other installations. The air base is located 10 miles south of Omaha, Nebr., in a rural farm community. In order to meet SAC alert reaction time and provide the necessary combat capability, 70 percent of SAC Headquarters personnel must live within 20 minutes driving time. Available housing within this time period has been saturated by military families and a considerable requirement for housing still remains. Currently the Air Force is constructing a 616-unit increment of Capehart housing which was authorized for construction in fiscal year 1957. A second increment of 400 units of Capehart authorized in fiscal year 1960 is under design. It is anticipated that construction will be started within the next 3 months. A request for an additional 500 units of housing is included in this year's military construction authorization program. When completed the Air Force will have 47 percent of its gross housing requirement or 2,100 units on base (including 600 housing units previously constructed). This leaves a requirement for 2,300 units or 53 percent to be absorbed by the community. In addition there is a housing requirement for 1,300 other military personnel for whom the Air Force cannot construct on-base housing. The requirement for the additional 500 units of Capehart housing was reconfirmed by the Omaha field office director of FHA in January 1960.

Mr. WEAVER. I noted the Air Force is closing down Pepperrell in Newfoundland. Is anything being done about moving some on-base housing to be vacated there to Argentia for much-needed use by the Navy? Or is this too expensive?

General WHITE. I should think it would be expensive, but I have no knowledge upon which to base a reply. We will look into it.

Mr. MAHON. Please also include in the record any reply you might get from the Navy or otherwise in this regard.

(The information to be supplied follows:)

PEPPERRELL AIR FORCE BASE HOUSING

There are 104 units of adequate family housing at Pepperrell Air Force Base which will be vacated by the Air Force. The Navy has a definite requirement for additional housing at Argentia but they do not consider it feasible both from the cost and technical point of view to move this housing to Argentia. These structures are frame, two-story, four-family units on concrete foundations. They are approximately 160 feet long with three party or common walls dividing the structures into the four living units. Because of its extreme length, the building would have to be cut in half before it could be moved anywhere. Pepperrell is 89 miles from Argentia over a rough poorly maintained gravel road. It is considered impossible to move the units over this road without considerable and expensive dismantling. Another consideration are the base right agreements at Pepperrell. The base is leased on a 99-year basis. It is anticipated that the Canadian Provincial Government of Newfoundland would object to the removal of any facilities at Pepperrell. They have a requirement to consolidate some of their Government agency offices in St. Johns, and they are also looking for space to house the University of Newfoundland.

Mr. WEAVER. I have another question concerning MINUTEMAN. You mentioned it is cheaper both in production and manpower costs. Does this mean MINUTEMAN, when dispersed, can be more or less forgotten until the time arrives for its use?

General WHITE. In general, that is, of course, as you intended it to be, a hyperbole—in being more or less forgotten. It will be possible to leave the missiles in their location—I am speaking of the fixed missiles—and to control them from a central point.

Mr. WEAVER. Will you squadron them much the same as you do with the ATLAS and TITAN close to existing SAC bases?

General WHITE. In general, that is true, in suitable places. However, the dispersion will be very great.

Mr. WEAVER. I would like to get your comments on the matter of thrust and Soviet space programs. Is this primarily propaganda or space-investigation value, or does it have real and vital military significance?

General WHITE. I think it has real and vital military significance in two respects. It enables them in the military field—by that I am referring specifically to the ballistic missile field—to have warheads of very great weight and, therefore, very great yield.

It has a minor advantage in range. I would say minor, because after you reach a certain range, range ceases to have the significance that it does if you cannot get where you want to. The additional thrust permits greater ranges. More significantly, the big booster has its aspects in the space field, which I feel will have a growing military application.

VULNERABILITY OF VANDENBERG AIR FORCE BASE FOR ATLAS BASE

Mr. WEAVER. General White, do you think we are taking a great chance in having our operational base for ATLAS at Vandenberg, where possibly a rocket-firing submarine could knock it out and where we have the main plant of manufacture of ATLAS at San Diego, which would be vulnerable in that same respect?

General WHITE. There is no question about the relative vulnerability of the Vandenberg site to submarine attack, but the primary reason for Vandenberg being selected was its geographical location on the shores of the Pacific Ocean where we could do operational and test firings. It is the place where we would expect to train our crews with their annual shoot of a live missile.

The missile factory simply evolved, as I understand it, from the aircraft factory floor spaces that were available. I have no doubt should we start all over again, we might want to put those plants in some less exposed place.

On the other hand, I think it is only proper to point out that in the age of the ballistic missile no point, be it on the sea or in a mountain or anywhere within the range of the missile—at no point is that location safe today.

Mr. WEAVER. But it is more vulnerable to submarines, is it not?

General WHITE. It is more vulnerable to submarines, but no more vulnerable to an ICBM than any other place.

Mr. WEAVER. Do you think there was any inclination to have gone into the TITAN program just because of the fact that the ATLAS was manufactured in its present location?

General WHITE. I do not think that was an influence. The influence was simply an advance in the state of the art and to get the best we could from the two types of missiles, the TITAN being somewhat more advanced than the ATLAS.

Mr. WEAVER. I certainly am not disagreeing with your statement, but last year General Irvine before a House committee hearing stated:

The thing that really caused us to feel that we ought to go the TITAN route as well as ATLAS was first from the standpoint of the vulnerability of the plant. We had created a plant inland for the TITAN. The other plant was sitting on the shore where it would be easy to knock out.

General WHITE. I have the highest regard for General Irvine, but I can only say I have been on the Air Staff a long time and I have never heard that theory before. I do think the location of the TITAN plant, which was built new for the purpose in Denver, was based on the geographical aspects; but the creation of the TITAN program in addition to the ATLAS program I would say unqualifiedly, in my opinion, it was not even a factor in spite of what General Irvine said.

DISCUSSION OF CANCELLATION OF TITAN

Mr. MAHON. In regard to General Irvine's testimony last year, I think we should include more of his testimony in the record, as found on pages 620–622 of those hearings.

(The material referred to follows:)

Mr. MAHON. I got the impression that the program suggested at our request by General Schriever was an optimum program and not necessarily a maximum program.

General IRVINE. That is absolutely right, Mr. Chairman. That was an optimum program from the standpoint of intelligent and economical use of the facilities available to us. This would mean using Aerojet engines, for example, in the ATLAS.

We are taking the guidance system which was intended for the TITAN, putting it in the ATLAS, and putting in an improved system.

We have this program fairly well mixed up at this point.

Mr. MAHON. General, this thing is all a little fuzzy to me.

I would like to know what the arguments were of those in the Air Force who felt we ought to cancel out the TITAN. I understand you perhaps were one of them.

General IRVINE. I was.

Mr. MAHON. Give us that side of the picture.

General IRVINE. I felt that way last year because I felt I was more intimately familiar with the structure of the ATLAS; and, therefore, I became optimistic about its capability, perhaps a little earlier than people who were less involved in it and the engine programs, and because a decision last year would have meant rather large savings at that point and time.

However, we discussed this in the Air Staff and put up arguments for and arguments against and we voted.

If I may go off the record a moment.

(Discussion held off the record.)

Mr. MAHON. General, I believe you felt last fall that strictly from the standpoint of funds and economy it would be desirable to cancel the TITAN and proceed with the one ICBM in addition to the MINUTEMAN. This is considerably later now. This is now April 13.

Do the arguments which you and those who agreed with you last year apply just as well now as they did then with respect to the cancellation of the TITAN?

General IRVINE. No; they are less valid now because the savings then were variously estimated from $750 million to $1 billion. Due to the high priority of the program, the fact it has been carried forward substantially on schedule, the savings now are probably 25 percent of what they were then, and the awareness of the people of this country to the fact that a missile gap existed is a lot more overriding in my opinion at this time than at that time.

Mr. MAHON. The people who are in the TITAN program—namely, Martin and Aerojet—must have known something of these arguments, and they must have been interested on about a 24-hour basis in this kind of situation.

General IRVINE. Mr. Chairman, I know these people very well, as I know all the heads of our major companies.

I must say for Mr. Bunker of Martin or Mr. Kimball of Aerojet that they never once interposed any comment of any kind at any place in the Air Force that I know of to try to save their program. They were good Americans.

Mr. MAHON. One could not be criticized for trying to carry on with a vast military project.

General IRVINE. They were working hard talking about the merits of their products, and improvements Aerojet was endeavoring to make over North American, the merits of the second stage weapon, more rigid structure, and so on. Those things were brought out in engineering discussions.

Mr. MAHON. Did those who argued against cancellation make the point that the cancellation of the TITAN program would make the Air Force and the managers of our defense program perhaps look a little foolish and wasteful for such a large expenditure if it were to be abandoned? What kind of argument was submitted along that line?

General IRVINE. This is something that always comes to mind because you have to start justifying the actions you took, and the fact that your foresight was perhaps not as good as your hindsight. We had some discussions along that line with the Navaho program and our major defense of the Navaho program was that if we didn't have that we would not have had an ICBM program which justifies everything said about it.

Mr. MAHON. One of the arguments against the Department of Defense, Army and Navy and Air Force, is that people do not give up programs quickly enough and they keep putting more and more money into it which in many cases means putting good money in after bad.

Undoubtedly there is a strong impulse toward not forsaking a program in which you placed your previous judgment and expended hundreds of millions of dollars.

General IRVINE. I started in this business at Wright Field some 30 years ago where we had 800 projects. I was given the job of being the hatchetman by the chief engineer and I cut it to seven. I still feel the same way.

It is the hardest thing in the world to stop a program. One of the best ways to make people critical of what you are doing is to keep them running a little hungry.

I think the Department of Defense and the Congress have done a good job on the Air Force on this line.

The pressure of this committee on us as to spares, and pointing out mistakes we made in judgment and limitations in management in the years after the war, investigations by the General Accounting Office and congressional committees in the period 1955–57 particularly, were the things that made us feel we must go ahead with improvements and such things General Dau has done where we have gotten down from 60 percent of flyway cost to 20 percent, in spares.

We were forced within a ceiling to invent ways to live.

In every one of our discussions I do not think any program was ever created in the Air Force where we did not have at least 20 versions of it with about 20 subdivisions of each version to try to keep within what we projected as a reasonable ceiling. We are doing that right now with our plans for the 1961 budget. We are figuring out what we can afford to keep and what we have to cut out within our projection of what we might reasonably get.

We are looking ahead at programs such as the B–70, the DYNASOAR. The Secretary, the Chief, and several of the staff spent most of Saturday trying to figure out where we are going in 1961.

Mr. GARLOCK. One of the real problems here is: In the 5 years we have come in this program since 1945, it is hard to remember how big some of these problems looked in 1954. There was not the assurance that they were going to be solved in 1954 that there is today. The double approach in a lot of these areas was to be sure that one system would work.

Mr. WEAVER. In the dropping of some B–47 wings this year, how many did you say were going to be phased out?

General WHITE. We are dropping two wings of B–47's for each of the B–52 wings over and above 13 and for each B–58 wing that comes into the inventory.

Mr. WEAVER. Where will those drops take place?

General WHITE. I am unable to state the geographical locations. Perhaps somebody here will have that, but I am not sure it has been decided.

General WEBSTER. I do not have the exact locations of those being phased out. They are generally at the double-wing bases where we have two B–47 wings.

Mr. WEAVER. General White, I would like your comments concerning the situation abroad in the event of a crisis and the evacuation of civilian dependents we have in that area. I was told last fall it would be quite a task to move civilians out in event of an emergency. I have asked Admiral Burke for his comments. What are your comments?

(Discussion off the record.)

Mr. WEAVER. Do you feel that Clark Air Force Base in the Philippines could be moved to some other location and we could accomplish the same net results as far as our defense capacity is concerned?

General WHITE. Purely from a military point of view and without respect to naming a location, you mean "geographically" or "more specifically"?

Mr. WEAVER. Specifically.

General WHITE. I cannot think of an available airbase.

Mr. WEAVER. Then say "geographically," within that general area.

General WHITE. If there were an airbase available to us in Borneo, I would say that base could probably do from a military point of view everything Clark Field can.

PILFERAGE AT OVERSEA BASES

Mr. WEAVER. As you know, there has been a lot of pilferage going on in the Philippines, particularly at defense installations. I was given considerable information on that by commanders of all the three services in that area. I wonder if you could provide for me, for the record, what the totals would be in dollars of the amount of pilferage that has gone on at any of your Air Force installations in the Philippines and particularly with reference to Clark Air Force Base.

General WHITE. Yes, sir; we can do that.

General FRIEDMAN. We have already asked for the information and we will certainly place it in the record at this point.

Mr. WEAVER. For the last 5 years or 10 years.

General FRIEDMAN. As far as they have it.

Mr. WEAVER. What you have available, to give us a general idea of the losses.

Mr. SIKES. Will the gentleman yield?

Mr. WEAVER. Yes.

Mr. SIKES. Would it not be interesting to determine also whether there are other bases in other areas where there is a greater degree of pilferage or whether this is the worst instance?

Mr. WEAVER. That is fine. I asked the Navy for that information. They said it was not available for other bases, even though they considered it a problem elsewhere, but they did provide it for the Philippines.

General WHITE. To translate that into dollars might be difficult. If we could make a general comparison, would that be satisfactory? I am thinking of the difficulty of sending cables to many places.

Mr. WEAVER. The Navy did transfer it into a dollar amount.

General WHITE. In the Philippines?

Mr. WEAVER. Yes.

General WHITE. Or on the basis of comparison?

Mr. WEAVER. The dollar amount total at Navy bases in the Philippines.

General WHITE. We would have no difficulty with that, but to say some other area in the world had a greater pilferage rate would probably involve inquiry all over the world.

Mr. WEAVER. Then confine it to the Philippines.

General WHITE. Very well.

Mr. FLOOD. Are you talking about Clark?

Mr. WEAVER. Clark Air Force Base.

(The information has been supplied to the Committee.)

PILFERAGE OF CLARK AIR FORCE BASE

Mr. WEAVER. In the latter part of November in 1959 the Philippine Government made an announcement that new security regulations would be enforced around Clark Air Force Base. Could you tell me what specifically was done?

General WHITE. I cannot, but I am sure we have the information.

Mr. WEAVER. The matter of cooperation with your people, which had not previously existed.

(The information was not received in time for printing.)

Mr. FLOOD. Will the gentleman yield?

Mr. WEAVER. Yes.

Mr. FLOOD. Do you know anything about a new hospital request for Clark?

General WHITE. I do not know anything about it as of the moment, but I know it is a perennial problem at Clark Air Force Base. You probably have yourself seen the hospital there. As a matter of fact, 12 years ago I was in command of the 5th Air Force in the Far East and the hospital at Clark Air Force Base was then in a sorry situation.

Mr. FLOOD. Even the moth-eaten sections they had set up to show visiting Congressmen in the corners were bad.

General WHITE. I fully subscribe to this.

Mr. GARLOCK. It was in last year's request and I think it is in again this year.

Mr. WEAVER. Previous testimony here by Mr. Amory of CIA and by Navy spokesmen indicated that this was quite a serious problem in the Philippines as far as pilferage is concerned. What are your comments in that regard?

General WHITE. I think it is a source of monetary loss. It is an irritation and annoyance. It requires very special handling with the Philippine Government because on a number of occasions we have had troubles when the base has been, in my opinion, properly protected and it then becomes a diplomatic and international relations

problem. I do not think it has ever set us back operationally in any way. It does indicate the possibilities of sabotage that could be performed. On the other hand, Clark Air Force Base is not one of our most sensitive bases.

Mr. WEAVER. In other words, if we are putting up with that in time of peace, what could we expect in time of war?

General WHITE. I think in time of war we could take steps that we cannot do right now and maintain the relations that we need with the Philippine Government.

Mr. WEAVER. General White, has the Air Force taken any steps to improve the security situation as far as the personnel are concerned who live off base?

General WHITE. In the Philippines?

Mr. WEAVER. Yes, sir. I have letter after letter from service people telling me what they pay for guards, wire enclosures, et cetera. Many are from Air Force personnel as well as Army and Navy personnel.

General WHITE. I know of many of our people, particularly the lower grades, who live off base in some of the barrios. It is a problem. I think we have a very highly competent commander there who has made great efforts, many of them very successful, in taking certain measures with the local governments. I also know that in each barrio area, individuals living in that area actually, on their own, pay for a guard who marches around the cluster of several houses where officers or airmen live. It is a continuing problem and one that seems to me as of now to be improving somewhat.

Mr. WEAVER. How would you compare the degree of cooperation as far as these conditions are concerned among the Filipinos as compared with the people in Taiwan or Japan or Korea? It was my feeling that there was no sincere or genuine effort made by the Philippine Government to correct these acts against our people and our property but that in the other countries the governments did cooperate. What comment would you have?

General WHITE. I do not think I have enough knowledge on one count to make a comparison and, secondly, I am not sure that this is a field in which I should comment even though I had an opinion because it involves the relative integrity, shall we say, of friendly nations.

Mr. WEAVER. You have no doubt but what the problem exists?

General WHITE. The problem exists there and also elsewhere.

Mr. WEAVER. That is all I have, but I would like to say to General White that I certainly was impressed with all of the Air Force people I met last fall, officers and men, and have a great deal of confidence and respect for them in the areas I visited and the tremendous job they are doing.

General WHITE. Thank you, sir.

Mr. WEAVER. That is all, Mr. Chairman.

Mr. FLOOD. Mr. Chairman, before we adjourn, I would like to say I will have some questions this afternoon. I would like the Secretary here, if he has any kind of chart to tie up this ATLAS and TITAN missile operation for operational units, to dust it off and bring it up.

Mr. GARLOCK. Yes; we have one showing the ATLAS schedule and the TITAN schedule and one together.

Mr. FLOOD. In case you miss with TITAN, can you beat it upstairs with ATLAS?

Mr. GARLOCK. We have the chart.

Mr. FLOOD. Like a French pastry, dust it off and bring it in.

Mr. THOMSON. It would be nice if they would bring that evaluation study that was submitted to them on each weapon, the ATLAS and the TITAN, and then your evaluation of the BMD.

Mr. MAHON. Are you going to get into that?

Mr. THOMSON. Yes, sir.

Mr. FLOOD. If you are going to get into it, all right. If you are loaded, make it part of your whole package.

Mr. THOMSON. We should have what was submitted to you from BMD up here and SAC, and then your evaluation and why you reached the conclusion you did. I am sure you have a file on that.

DEPOT MAINTENANCE BY CONTRACT

Mr. MAHON. Before closing this morning's session, I should like, General Friedman, for you to insert in the record at this point what the Air Force policy is with regard to the performance of depot maintenance by contract. As I recall, the appropriation for fiscal year 1960 included approximately $320 million for this purpose. Would you please show the amount you have currently programed and how much of that amount is obligated as of your last official report? Would you also indicate the reasons for the change between the amount appropriated and the amount currently programed if, in fact, there is a change?

General FRIEDMAN. Yes, Mr. Chairman, we will be glad to furnish that for the record.

(The information requested follows:)

DEPOT MAINTENANCE BY CONTRACT

1. The Air Force policy with regard to depot maintenance is that it will be provided through a combination of commercial and organic depot sources in accordance with the following basic principles.

(*a*) The USAF must organically maintain the capability to manage the entire logistic support programs. In developing the organic capability, the Air Force must be able to approve, direct, and control the entire depot logistic program. This managerial capability must keep abreast of management and technological advances to assure that an organic capability is in existence to manage new weapon systems as they enter the active inventory. This capability must be developed during the research and development stage of new weapon systems to assure that a capability is established to provide the logistic support essential to assure fulfillment of established operational objectives of the new weapon system.

(*b*) The USAF must develop sufficient capability to organically provide logistic support to those weapon systems considered most vital to carrying out the Air Force mission. The prime prerequisite in the development of this organic support capability is to identify the support requirements associated with those vital systems and their relative priority; i.e., that requirement associated with those aircraft and missiles having the most urgent emergency war plan mission assignment. No fixed percentage can be established incident to the amount of the vital support requirement that should be done organically or by commercial sources. The factors to be considered in determining that portion of the logistic support to be accomplished officially are—

(1) Military requirements.
(2) Nature of mission.
(3) Program inventory strength.
(4) Established organic depot/contractor facilities and the most economic utilization of the combination of the two sources.
(5) Projected vital life.

(c) The USAF must have sufficient capability within contractor and interservice sources to accomplish nonvital support requirements. The nonvital logistic support programs must be managed in the same manner as the vital programs. It is only through the management of both that continued adjustments can be made to insure that the organic effort is expended in support of the most vital weapon systems support requirements. Nonvital logistic support will consist primarily of that support associated with weapon systems utilized in training and support missions. Support requirements incident to nonvital systems should be accomplished by contractor or interservice facilities except where it would be necessary to make a sizable investment in capital equipment to establish a contract source which would duplicate already established organic sources.

2. Included under the fiscal year 1960 O. & M. appropriation submitted to Congress was $320 million for depot maintenance by contract. The amount programed in fiscal year 1960 for depot maintenance by contract is, as indicated in the fiscal year 1960 column of the fiscal year 1961 estimate, $296.5 million. Obligations incurred against this program as of December 31, 1959, are $185.8 million; commitments reported as of the same period are $232.1 million.

3. The difference of $23.5 million between the amount provided in the estimate for fiscal year 1960 and the amount currently programed stems essentially from a reduction in programed reimbursements. After the submission of the fiscal year 1960 O. & M. estimate, requirements for centrally procured material which were previously financed through the O. & M. appropriation as a reimbursable from the procurement appropriation were subsequently directly financed by the procurement appropriations. An amount of $21.1 million for this item had been included as a reimbursable in the depot maintenance by contract total of $320 million. The balance of the difference ($2.4 million) reflects adjustments in program requirements which have generated since the submission of the fiscal year 1960 estimate.

Mr. MAHON. Very well; we will reconvene this afternoon at 2 o'clock.

WEDNESDAY, JANUARY 27, 1960.

AFTERNOON SESSION

Mr. RILEY. The committee will come to order.

I believe Mr. Thomson has the witness.

DECISIONMAKING IN ATLAS-TITAN PROGRAMS

Mr. THOMSON. I was very much interested in your remark on the ATLAS program and the TITAN program.

When Secretary Gates was before the committee I questioned him a little bit about this. He at that time on page 159 of the 1960 hearings that have already been published set forth the reasons, at least in his mind, that governed the decision you have made. I would like to compare with you the proposal that you made last year to that for this year. You have increased the ATLAS from 9 squadrons to 13 squadrons and the TITAN from 11 squadrons to 14 squadrons, but with regard to what was recommended by this committee last year you have reduced the ATLAS from 17 squadrons to 13 squadrons and you have increased the TITAN from 11 squadrons to 14 squadrons.

The decision of this committee was reached last year after some very careful consultations with the Air Force. At that time I was perturbed whether we ought to go ahead with TITAN at all, and upon the advice and counsel of the Air Force, I joined with the majority of the others in thinking we probably should.

This, though, I think should be subject to continuing review.

I think that there was an error in reporting the testimony on page 158 of this year's hearings as published last week. The testimony shows that Secretary Gates said, with reference to TITAN tests: "Six shots with two failures." I questioned him—100 percent successful, including all objectives? Secretary Gates replied, "No. Four successful and two failures." What he actually said was four only partially successful and two failures.

As a matter of fact, you have not had a TITAN yet that has been shot that has achieved all of its objectives? Is that not true?

General WHITE. Not all of the objectives of the TITAN, but with regard to particular tests for which the tests were designed, there have been successes.

Mr. THOMSON. Getting down to the specifics, you have not had one shot in the range of 5,500 nautical miles.

General WHITE. We have not even attempted to do that.

Mr. THOMSON. You are a long way from home and you are still having failures?

General WHITE. Yes.

Mr. THOMSON. In connection with this decision, who was it that made the initial decision? Who made the initial decision to start the TITAN program in the first place? What people made that decision and who was on the advisory committee?

General WHITE. I am sure that the decision was made by the Chief of Staff and the Secretary of the Air Force.

Mr. THOMSON. The recommendation came from a committee.

General WHITE. It probably came from the ballistic missile committee.

Mr. THOMSON. Is there no one around here that knows at the present time? I understand, because it was some time ago.

General WHITE. I may have been there myself, but I do not remember participating as far back as that. I think there may be people here who remember the history of it.

Mr. THOMSON. Dr. York was on the committee, was he not?

Mr. GARLOCK. No. At the time that the original decision was made to go to the missiles, I was there. I do not recall exactly the whole procedure, so I think that we would have to give a statement for the record.

Mr. THOMSON. Give a statement to the committee showing the names of the people who recommended that to the Chiefs of Staff, the people on the committee who recommended we go ahead 2 years ago, and the people who recommended it last year and this year.

Mr. MAHON. Do you want that at this point in the record?

Mr. THOMSON. Yes.

(The information will be included in a later volume of these hearings.)

Mr. THOMSON. My personal feeling on this is had I been in the shoes of those people when the initial decision was made I would have made the decision as General Irvine did. I repent I did go along a year ago on the test record and all other information then available for both ATLAS and TITAN.

Now, the reasons that are given by Secretary Gates, were, first, the TITAN had a greater growth potential in terms of war capability and range. Is that the fact or not?

Dr. CHARYK. I think you can make the positive statement that a two-stage——

GROWTH POTENTIAL OF ATLAS AND TITAN

Mr. THOMSON. Let us stick to this. Does the upgraded type have a greater potential for warhead capability and range?

Dr. CHARYK. It is our opinion that the TITAN has a greater growth capability.

Mr. THOMSON. What is the growth capability you think it has in terms of megatons and in terms of range?

Dr. CHARYK. The other day I indicated that we would have a capability in a growth version to carry a payload of the order of ———. It would have ranges of the order of ———.

Mr. THOMSON. Was not the objective ——— delivering a ——— warhead?

Dr. CHARYK. That is approximately right.

Mr. THOMSON. Is not that what TITAN is supposed to do when it is upgraded?

Dr. CHARYK. That is the type of performance that we envision.

Mr. THOMSON. Would not ATLAS do the same thing if it were it is upgraded?

Dr. CHARYK. ATLAS could probably theoretically also achieve this kind of capability on paper. They are both paper proposals at this stage of the game.

Mr. THOMSON. The TITAN capability in any range is still on paper, is it not?

Dr. CHARYK. That is correct.

Mr. THOMSON. As one man said to me then, "Since it starts from nothing, the growth potential of TITAN approaches infinity." And the ATLAS has had how many consecutive fully successful flights in the last 8 or 9 months, since you corrected the valves?

Dr. CHARYK. It has been extremely successful. I think we are up to 17.

Mr. THOMSON. Consecutive successful flights?

Dr. CHARYK. That is correct.

Mr. THOMSON. The Secretary goes on to say that the TITAN can be launched out of a silo. It has a greater capability for insilo launching.

Dr. CHARYK. That is correct.

Mr. THOMSON. If the ATLAS were to be upgraded and improved, does it not have that same potential?

Dr. CHARYK. I think the problems are likely to be more severe in the case of the ATLAS simply because of the difference in the type of structure that is used. It also has a somewhat larger diameter, but I do not think that is of primary importance.

Mr. THOMSON. Not when you get to building one the size of the hole that I saw at Vandenberg.

Dr. CHARYK. It was an impressive hole.

Mr. THOMSON. Now you get to another thing, growth potential for space use. Do you lay great value on that?

Dr. CHARYK. We think it is an important element.

Mr. THOMSON. What kind of fuel is the upgraded TITAN going to use?

Dr. CHARYK. Storable propellants. ———.

Mr. THOMSON. Now, I am glad that you mentioned storability. Is it not a fact that storability is coming with ATLAS whether you upgrade it or not? You will actually store the fuel in the missile?

Dr. CHARYK. Convair has made a proposal which would introduce a means to store the liquid oxygen on board with proper insulation methods, and so on.

Mr. THOMSON. It is a rather simple proposition, is it not?

Dr. CHARYK. I think that it can be done.

Mr. THOMSON. They are already using the same type of insulation materials around another part of the missile, are they not?

Dr. CHARYK. No. This would actually involve—how shall I describe it—sort of a sheet shield about the missile which would provide the proper environment so that the liquid oxygen boil off would be minimized, and when you are getting ready to fire it would be moved out of the way and the missile would be ready to go.

Mr. THOMSON. They have been using that material successfully to achieve similar types of objectives within the present missile?

Dr. CHARYK. The same kind of insulation techniques and materials have been used, but not this particular configuration. It would have to be developed in application.

Mr. THOMSON. It has been shown it will work.

Dr. CHARYK. The materials and the techniques, yes.

Mr. THOMSON. Let us get back to the fuel proposition. Is it not a fact that NASA says that is not the type of fuel that you need for space; that you need to go to hydrogen and oxygen before you can be successful in a space effort?

Dr. CHARYK. I believe the hydrogen-oxygen has greater performance. The primary thing we are looking for is the storability feature and propulsion simplicity which we think is very important from a military point of view. They are obviously of less importance from a scientific space exploration point of view.

Mr. THOMSON. With this fuel that you are going to use you get into problems of high freeze points that will give you trouble in places like Denver in the winter months?

Dr. CHARYK. It will have to have some temperature control.

Mr. THOMSON. On this business of hydrogen and oxygen being what I wanted, is it not a fact that CENTAUR is going to use that fuel?

Dr. CHARYK. CENTAUR uses hydrogen and oxygen.

Mr. THOMSON. Do you not expect to get that about the same time that you would be able to get an upgraded type?

Dr. CHARYK. We are expecting the first CENTAUR shot in 1961.

Mr. THOMSON. And the first upgraded TITAN will be when?

Dr. CHARYK. The first upgraded TITAN will be in ———.

Mr. THOMSON. Fiscal year ———. So you are going to have hydrogen and oxygen supposedly ——— ahead of it?

Dr. CHARYK. We think the hydrogen-oxygen looks very attractive. It has a way to go.

Mr. THOMSON. That is what NASA wants, hydrogen-oxygen. That is what I understand.

Dr. CHARYK. This is one of the highest propellant combinations from a performance point of view; and hence their interest in the material.

Mr. THOMSON. I am not going to further on this.

Do you have that file here that shows the proposals and possibilities on both ATLAS and TITAN as presented from the Ballistic Missile Division? I am speaking now of the growth potential of each.

Dr. CHARYK. We do not have the information here.

Mr. THOMSON. Can you supply it?

Dr. CHARYK. We can supply it. It will be in the nature of an analysis of the problems and advantages both ways.

Mr. THOMSON. I understand. So that it will be absolutely clear what I talked about when we recessed at noon, I want the analysis submitted to you by the Ballistic Missiles Division on the possibilities of upgrading the ATLAS and on the possibilities of upgrading the TITAN and their recommendations. Then I want the file on who looked it over, the committee, and who made the recommendation to proceed with TITAN, and the same with respect to all the decisions to go ahead with TITAN, and not to do the upgrading of ATLAS. We can look over your file and save a lot of time, and when the research and development people get here we can go further into this.

(The information will be included in a later volume of these hearings.)

RECOUPMENT IF TITAN CANCELED

Mr. THOMSON. How much money can be saved today if we cut off this TITAN program and upgrade the ATLAS?

General FRIEDMAN. I do not believe that you could recoup anything much beyond four missiles already underway.

Mr. THOMSON. How about your research and development and things like that?

General FRIEDMAN. If I recall correctly, for storable propellants in this budget for fiscal year 1961 there is a figure on the order of $90 million.

Mr. THOMSON. Last year we were told if a decision had been made a couple of years ago we could have saved $1 billion or $1.5 billion. Last year you told us we could have saved about $750 million, I think. Could we only save today about $90 million?

General FRIEDMAN. You asked a specific question with regard to the research and gave you a figure of $90 million.

Mr. THOMSON. What did the Martin people say that it would cost to upgrade the TITAN? How much is it going to cost for that? Is it not around 250 million?

General FRIEDMAN. Convair gave that figure. I do not recall seeing a similar figure from Martin.

Mr. THOMSON. How much is it going to cost, Dr. Charyk?

Dr. CHARYK. I think the total cost of the research and development program to incorporate the storables, together with the other improvements in the TITAN, is about the order of $200 to $250 million. On the other hand, there is a saving in ground handling equipment which tends to compensate for the increased costs in research and development, and it is my recollection at the moment that when you get to approximately 14 squadrons the additional research and development costs have been balanced by the savings in equipment and personnel.

Mr. THOMSON. The savings in ground handling equipment over the present type TITAN?

Dr. CHARYK. Over the present TITAN or the ATLAS, for that matter.

Mr. THOMSON. The present ATLAS or the improved ATLAS if you are to have an upgraded ATLAS?

Dr. CHARYK. The main saving in equipment and personnel arises from the storability feature and the simplicity of the propulsion design, because all of the low temperature requirements are eliminated through the use of storables. So the equipment is much simpler and requires fewer people to maintain and operate it.

Mr. THOMSON. The fact is the proposal to upgrade your TITAN ran some place in the neighborhood of $250 million; is that not correct?

Dr. CHARYK. Increased research and development costs.

Mr. THOMSON. And the proposal to upgrade ATLAS ran around $40 to $50 million?

Dr. CHARYK. Those two figures are not comparable because the improvements proposed are different.

Mr. THOMSON. I will go over the file very carefully. What it looks like to me at the present time is some people made a real sharp and good decision 3, 4, or 5 years ago to get in the TITAN because as was mentioned in the hearings of last year, we needed an alternate method. Last year I do not know whether I made such a sharp decision to go along with you or not when we could have saved some $700 million. All considered though I think it was a right decision. But now I am not only concerned about your cost, but you have a situation here where you are recommending that we step up the number of squadrons of the one that does not work and you cut down the number of squadrons that do work, so I am interested in what we are going to end up at what is stated by all to be the most critical time in the way of a deterrent providing for the security of this country and the peace of the world.

USE OF SCIENTIFIC PERSONNEL IN TITAN UPGRADING

Also, I am interested in this, the time that you can get it. I notice that you have a slippage here clear up into 1963 before you get any sizable force of operated TITANS coming in. I am inclined to believe—and I think the file ought to show from the briefings that I had during the fall—you can get the ATLAS upgraded to do the same mission defensewise in all respects about 6 months sooner. Therefore, you are getting fewer missiles at a given time and that is critical as I view it. Most of all, when you tie this TITAN research and development force up, are you not using some scientific know-how? How many scientists did they have involved in the TITAN program?

Dr. CHARYK. We could provide that.

Mr. THOMSON. I wish you would.

(The information will be included in a later volume of these hearings.)

Mr. THOMSON. Is it not a fact that the scientists have been telling us that we have to turn out more scientists? And further that if there is any place that we have a critical area it is in scientific know-how?

Dr. CHARYK. There is no doubt there is a need for properly trained and experienced people in the rocket business.

Mr. THOMSON. How can you justify tying up that many scientists, really top-level scientists, on something that has not worked and will not do anything more militarily than the ATLAS has already shown it will do?

Dr. CHARYK. I would like to reiterate one of the points that I attempted to make this morning which I feel is a very important one in regard to the use of storable propellants: this relates to the simplicity in the propulsion system and we believe a considerably enhanced reliability from a military point of view. These are things that are difficult to measure in dollars, but we think they are extremely important.

Furthermore, we think it is important in the advancement of rocket technology to explore the utilization of the propellants that I have referred to in a large missile of this type because of its desirable military features.

Mr. THOMSON. Is it not a fact when you go to this nitrogen tetraoxide and hydrogen that you are going to have problems as far as your mixture ratio is concerned?

Dr. CHARYK. The tests on the combinations so far have been very successful. As a matter of fact, I think we have eliminated the worst problems that have hounded us in the ballistic missile program. These have been associated with the use of cryogenic materials, and the severe problems associated with handling liquid oxygen and materials of that type.

Mr. THOMSON. You are coming back when the research and development program is presented? You will be back here?

Dr. CHARYK. Yes, I will be back for that.

Mr. THOMSON. Then I will have time to look over the files and know more about this subject. It seems to me that there should be a continuing evaluation of this situation, and if you can show me where I am cranking in some wrong factors, I will be very happy to know.

In the light of the recent reliable and successful tests of the ATLAS as opposed to the failure of the TITAN, and the time element concerned, and the need in other programs and the scientific waste involved, and based on your testimony I have just reached the conclusion for the moment at least that I am going to revise my estimate of last year; that TITAN should be stopped. I will wait until I have looked at the file on your estimate to see what factors you have cranked in.

Mr. FLOOD. May I ask a question? With respect to liquid fuels vis-a-vis the solid fuels as restricted to the element of guidance, is not the ability to control the liquid fuel by valves an element in favor of liquid fuels being more dependable for guidance than a solid fuel?

Dr. CHARYK. The problem of thrust termination is different in the two cases. It is a matter of activating the valves in the liquid case. In the case of the solid, it is essentially the opening up of holes in the case which will terminate the burning. It goes down to a question of how reproducibly you can do this in the two cases.

Mr. FLOOD. "Reproducibly"? Fine. I heard another one in the subcommittee the other day—"we will now annualize these figures."

Mr. THOMSON. Perhaps it would be best if I started reading questions and had them answered in the record.

Secretary Gates and I had some considerable discussion about configuration and what effect it was going to have upon retaining the nonflier in the Air Force. I see that you addressed yourself at some length to that, General White.

ICBM BASE LOCATIONS

I asked the Secretary on page 169 of the printed hearings last week: "I would like to see the sites that have been selected and what the configuration is going to be at each site submitted to the committee."

The answer appearing is:

"The material requested is classified and has been provided for the committee."

How can you explain that when I pick up this morning's Washington Post and read this:

The Air Force announced yesterday the selection of locations for four additional intercontinental ballistic missile bases. This completes the list of launching facilities for the 13 ATLAS squadrons in the current program. The four new launching locations, each of which will have nine firing positions, are Altus Air Force Base, Okla.; Dyess Air Force Base, Abilene, Tex.; the Walker Air Force Base, N. Mex., and Plattsburgh Air Force Base, N.Y.

Why is it not secret to the Washington Post and it is classified as far as the official record of this committee is concerned?

General WHITE. I can only hazard a guess on that. I note that the hearings are dated January 13 and the announcement evidently came out from us yesterday. I think at the time the Secretary of Defense made the statement it was correct. He may not have known that we were in the process of releasing that information.

Mr. THOMSON. All the rest had been released—the Ellsworth, Spokane, Lincoln, Cheyenne, Denver, and all over the country. This is just another example of classification getting completely out of hand. Here it is in the Washington Post 5 or 6 days later.

General WHITE. My point is, one, we have to have a firm decision; secondly, I hope we are fairly successful in keeping the interested Members of the Congress posted in advance of these release dates. For that reason we do have a little delay from the time we make the decision until we are ready to release the information.

Mr. THOMSON. I wish that that list of bases that I requested previously could be put into the record at this point—where they are and what their configuration is, and whether or not airfields are present or not present at the base.

(The information will be included in a later volume of these hearings.)

Mr. THOMSON. I guess this information is declassified now?

General WHITE. Yes.

General FRIEDMAN. At the time that the insert was made the release of the funds had not been made by the Congress. The reprograming was under consideration by the affected committees, and that release was made, I recall, only yesterday morning.

RATED OFFICERS IN MISSILE COMMANDS

Mr. THOMSON. I can understand that—how things like this can happen. With regard to your configuration, I am very concerned. I discussed this with Secretary Gates. As you very well recite, and as the Secretary of Defense recited in his statement, one of our major problems in order to get defense at a reasonable cost is the retention of key military personnel and there is a great savings that can be effected if we can keep this personnel and not lose them.

Now, I notice something in your statement that causes some confusion in my mind. In order to be able to command a wing that has these bombers in it, you have to be a pilot, a rated officer. Therefore, the highest, except for two or three sites that a nonrated missileman goes is a squadron commander. Under your table of organization that would be a colonel. Then under the table of organization the wing commander is where you get to be a general as far as the chain of command duties are concerned.

General WHITE. That is a general officer position vacancy.

Mr. THOMSON. I talked to some full colonels, the people who have been sent to MIT, California Tech, and so forth, at taxpayers' expense who have had 15 years or so in the service, and I said, "How does this affect your thinking?"

They said, "They told us if you are going to command this range you have to be a rated officer because if you cannot fly them you cannot command them. Therefore, what we have to look ahead to is only a chance to command a wing at Warren, or a wing at Lowry, or get one of the few staff jobs which might call for brigadier general, so there are going to be darned few of us selected for generals. We just think that we will get out as soon as the 20 years is over."

I told them, "After all, I think that you can get a pretty good job because you are the ones who really have the know-how and the ones industry is looking for, outside of the lobby area."

Now, I talked with General Olds about this. I explained it to General Olds. I said, "I want you to tell me how you can help me keep people in the service."

He flatly told me that he could not be of any help. For the record, he is the general who commands the 15th Air Force, which is to have the missiles in it. Your statement raises some confusion in my mind. Can a nonflying man, with no flying experience whatsoever, who is in the missile command at the present time as a colonel with 15 years of experience jump to a general and command the configuration that you are going to have at Ellsworth Air Force Base with two squadrons of bombers and one squadron of missiles?

General WHITE. He could not command a wing which includes the bombers. I think you perhaps would agree that you must have a flying officer in a unit which contains a flying organization.

Mr. THOMSON. I would not agree.

General WHITE. I will go a level higher and say that the commander of all the missiles, the division commander, can be a nonrated officer, and I think two of the missile sites are commanded by nonrated officers.

Mr. THOMSON. Which of the two?

General WHITE. I think Warren is one.

Mr. THOMSON. Colonel Rader is a rated officer.

General WHITE. He happens to be, but a nonrated officer can command the base.

Mr. THOMSON. If Ellsworth comes in, could he command it and the bombers too?

General WHITE. No, not command the bombers. That is quite true.

Mr. THOMSON. He is out of business if he is not rated.

General WHITE. A nonrated officer could replace General Wade who is the commander of the first missile division.

Mr. THOMSON. I am interested in the statement of yours that if you cannot fly them you cannot command them.

General WHITE. I am very happy that you are interested in these people, particularly since the first big missile unit is going into your State. I am grateful for your interest. I want to assure you, as I stated earlier to the committee when you were not here, we are very cognizant of the very problem that you are talking about in the Air Force. It is part of the impingement of technology on our structure. I stated the other day I thought important changes have followed in the personnel field.

Prior to the time that the missile squadrons were first envisioned all flying Air Force units, combat units, required a rated officer. For good reasons which I think would take too long to put in the record at this time, such commanders must be rated officers. The original regulation on the command of missile units came out and stated that they need not be rated officers, but preferably rated officers.

I have changed that regulation within the past few months so that there is no distinction. In addition to that, I recently appointed a board of general officers to go very thoroughly into the whole subject of careers for nonrated officers. I can also cite that we are taking 2,100 rated officers off of rated status as of this month or next month, and those officers are going to be in exactly the same status, and we have specifically stated to their commanders, and to the Air Force as a whole, that that will not in any way impinge upon their future potential.

Mr. THOMSON. I read that into the record and I want to commend you for it. But the fact is that you are going to have Warren as the first all missile base. Lowry will be all missile. What others will be all missile?

General WHITE. I think that a great deal will depend upon which bases we phase down the bombers.

Mr. THOMSON. You have already announced the 13 sites.

General WHITE. I think the bomber locations are not fixed that far into the future. I can only say this, I am aware of the problem. I appreciate your interest in it and we are acutely anxious to do everything we can to not only provide a top career for these officers, but give them a career all the way along the line. We must retain that type of officer.

Mr. THOMSON. If we do not, and if missiles are the No. 1 thing of the future, we are going to be out of business. We are not only going to be behind but out of business.

General WHITE. I think one thing that I failed to state the other day that is of interest to me is that we have at the present moment three lieutenant generals in the Air Force who are not rated, which is a very high percentage, and I do not think that it can be said that there is not a career now.

This is a new development that is increasing and we are aware of the problem and we are going to do everything that we can.

NONRATED USAF GENERAL OFFICERS

Mr. THOMSON. Will you, for the record, give us the nonrated officers that you have above brigadier general, major general and on up, and what slots they hold down?

General WHITE. Yes.

(The information requested follows:)

Nonrated USAF general officers (major generals and above only)

Rank	Name	Position
Lieutenant general	Asensio, Manuel J. (retires Jan. 31, 1960).	Comptroller of the Air Force.
Do	McKee, William F	Vice Commander, Air Materiel Command.
Do	Carroll, Joseph F. (effective Feb. 1, 1960).	The Inspector General, USAF.
Major general	Bogart, Frank A	Director of Supply, Air Materiel Command.
Do	Cathroe, James S. (Dental)	Assistant for Dental Service, Office, The Surgeon General, USAF.
Do	Donnelly, Harold C	Assistant DCS/Plans and Programs.
Do	Farnsworth, William P. (Air Force Reserve).	The Auditor General, USAF.
Do	Finnegan, Terence P. (Chaplain).	Chief of Air Force chaplains.
Do	Friedman, Robert J	Director of Budget, AF Comptroller.
Do	Harmon, Reginald C. (JAG)	The Judge Advocate General, USAF.
Do	Hewitt, Albert G	Director of Logistics Division, J-4, U.S. European Command.
Do	Kuhfeld, Albert M. (JAG)	Assistant Judge Advocate General, USAF.
Do	Miller, Walter I. (Air Force Reserve).	DCS/Comptroller, U.S. Air Forces in Europe.
Do	Minton, Augustus M	Director of Civil Engineering, DCS/Operations, USAF.
Do	Ostrander, Don R	Director, Office of Launch Vehicle Programs, NASA.
Do	Parks, Harlan C	Chief, Army and Air Force Exchange Service.
Do	Porter, Harry C	Comdr., Air Materiel Force, Pacific Area, AMC.
Do	Thurman, William T	Assistant for Production Programing, DSC/M.
Do	Tidwell, Moody R., Jr. (JAG).	Judge Advocate General, Air Materiel Command.

Rated but not on flying status (major generals and above only)

Lieutenant general	Picher, Oliver S	Director, the Joint Staff, JCS.
Do	Tunner, William H	Commander, Military Air Transport Service.
Major general	Benson, Otis O., Jr. (Medical)	Commander, Aerospace Medical Center, ATC.
Do	Dougher, Charles B	Chief, Aerospace Technical Intelligence Center.
Do	Doyle, John P. (retired)	Director of Advisory Committee for Trans Study, Interstate and Foreign Commerce Comm, USS.
Do	Hopwood, Lloyd P	Director of Personnel Procurement and Training, DSC/P.
Do	Miller, Troup, Jr	Commander, Arnold Engineering Development Center, ARDC.
Do	Muehleisen, Dolf E	DCS/Plans and Policy, J-5, Headquarters North American Air Defense Command.

Mr. THOMSON. The reason I think this is highly important is because we lose the personnel which are key to the whole ICBM problem and we cannot replace them at any cost. I know that is what is going on in the minds of the men. They told me so.

I had a fellow come up to me after I talked to a small group at the Kiwanis Club who said, "I am glad you got on this because this is the reason that I got out of the Air Force." He was in some highly developed radar operation.

I will insert additional questions in the record at this point to be answered later.

(The additional questions to be submitted will appear in a subsequent volume.)

Mr. MAHON. Mr. Flood.

PUBLIC IMAGE OF MILITARY POWER

Mr. FLOOD. I am sorry that the Secretary is not here, for I would like to have him hear this as well, but I have been pointing out to

your opposite number of your crowd here that I am very unhappy about an atmosphere that prevails in Washington at the very highest level, uniformed and nonuniformed. I have an opinion that a great nation's ability to control and affect the course of human events, to react for its own security, is dependent upon two things, and all I hear you people talk about is only one of the two, and they are absolutely indivisible. You are so enmeshed in the reality of power that you lose complete vision of the second element which is the necessity for the existence of the image, the public image of that power. One without the other will not do. And the Department of Defense, in my opinion, from what I hear sitting here day after day, is so engrossed in and enamored with the first that they have lost all reality about the second.

Let me assure you that the mere existence of the fact is not enough. It is what is in the minds of the people of the world and what they think the facts are. And I believe that the people of this country and the people of the world think we are in a secondary military position because of this sputnik and space business and everything else. You forget this very important second thing.

Now, you go ahead and establish, from your point of view, the physical existence of power. You have lost track of the rest of it. That could be a very deadly error.

General WHITE. May I interrupt. I think that General Twining touched on that.

Mr. FLOOD. I do not think he did.

General WHITE. He touched on it, I say. I do not think that he was exhaustive on it.

Mr. FLOOD. I do not think he even touched on it. He was out in the wild blue yonder on this new crystal ball concept that we have been kicking around all over the lot which has confused everyone and compounded confusion. That is something else. We belabored that.

I am concerned about my premise very, very much.

Now, let us go back to last year when we had this budget on missiles, and this committee was upset and concerned and we had exhaustive hearings as to should we give you more money for missiles, more money for ATLAS, more money for TITAN, or both, and we decided after all the values were weighed and equated it would be appropriate to give more money for the ATLAS and TITAN missiles.

Now, what I am not quite clear about, and what this committee, I believe is not clear about—and I am sure the Congress is not, and the country is not—is what happened to the money as far as the missiles were concerned. What did we do? Did we merely provide money to speed up the production of missiles? Did we buy more missiles per month? Did we start out with 5 a month with all this new money and did we buy 10 a month? What did we do with this money? What happened to the money vis-a-vis Russia's output on missiles at the same month, according to our intelligence. And finally, point two, what is now the new rarified intelligence attitude on the production of missiles in Russia, ICBM's?

Last year you gave us a figure. What is your thinking now per month, Russia's ICBM's in the next year ahead? What is ours? How

do they both relate to last year when we gave you the money and what did we buy for the money—more missiles, more speed, or what?

Mr. GARLOCK. Off the record.

(Discussion off the record.)

CONGRESSIONAL INCREASE IN 1960 ICBM APPROPRIATIONS

Mr. FLOOD. This committee acted on ATLAS, but the bill, as it became law, was for a program. I tried to get THOR and JUPITER into it and it got tossed out. I think that you wound up with a law that was a program.

Mr. GARLOCK. What happened was this: with regard to the four squadrons that were announced yesterday, part of the $85 million was used for the advance procurement on missiles and ground equipment, and these four squadrons come in in the first half of the fiscal year 1963. In order to get the construction money we had to reprogram $185 million—to show you how interested we were in getting it. In cooperation with the authorizing committees, we got clearance on that yesterday to go ahead on that large change.

Here [indicating] are the previous squadrons. Vandenberg is a six by one. F. E. Warren is a six by one. The second Warren is a three by three. Offut is three by three, and on the ATLAS we go to the fifth squadron and from there on they are one by nine. From the eighth squadron on they are in-silo missiles with the elevator lift for firing.

Mr. FLOOD. How much money did I give you last year?

Mr. GARLOCK. $85 million for the ICBM program.

Mr. FLOOD. For the program. Where did I get my money's worth?

Mr. GARLOCK. You got a start in this fiscal year on the missiles and equipment we have to have for these four squadrons.

Mr. FLOOD. The reason that I want to point this up is because I had the impression last year, right or wrong—and I thought the committee certainly had—that we were going to get much, much more for our money in this period than that chart now shows we got for the money. We could have been wrong. I do not think that we were misled, but the presentation we had was for something else than we have got, even though it is on the chart.

Mr. GARLOCK. We talked about 17 squadrons. The amount of money that we had to have in the fiscal year 1960 had nothing to do with these last squadrons because you do not start procuring the missiles.

Mr. FLOOD. What happens is every time this committee labors, and after months suggests a program, rarely, if ever, when we come back the next year do we recognize what we directed. This is another case. Why? Why cannot this thing hold together for 12 months? Is the lead too fast?

Mr. GARLOCK. We can go into why we made the selection if you like.

(The information follows:)

The Air Force has taken into account all the known aspects of the threat and the forces required to deter that threat, within the major parameters of time, numbers, and state of the art. The present mix of ICBM's; i. e., ATLAS, TITAN, and MINUTEMAN, is in our judgement the best force obtainable within these limitations. Because we recognize the fact that any research and development

program may develop difficulties that are so delaying or are ones that make the solution not worth the effort, we believe that having three missles provides us with the required flexibility. Initiating and keeping these essential programs going until the facts prove that another course of action will better achieve our goals is that important ingredient that allows us to change our course, should it be necessary. Each program has certain objectives to meet within various time periods and experience dictates when these time objectives must change.

The Air Force is constantly reexamining and reevaluating the ICBM program to determine where the cutoff point is which will give us the highest system effectiveness and longevity consistent with the mission.

A faint heart in the time period of February to July 1959 could well have caused program cancellation of ATLAS, which now is turning in a remarkable performance. The three programs all have a combined as well as an individual role to play in the overall objective. Namely, time, improvement specilization and quantity. ATLAS now gets us in the earliest operational posture and starts us into the essential time period; TITAN will augment the force and should bring with it the required improvements and specialization; and MINUTEMAN the quantity. All three combined provide the backbone of our ICBM strike force.

Mr. THOMSON. They told me out at Convair that they could grind those ATLAS missiles out one a day if you wanted them.

Mr. GARLOCK. It is the hole in the ground and the equipment and the checkout.

Mr. THOMSON. Why do you not start digging more holes in the ground simultaneously? There are a lot of contractors available.

Mr. FLOOD. This is a weapons system.

Mr. GARLOCK. At this point we have approval on 13 squadrons and we have that all underway. We looked into this the other day, and it is possible to get one more squadron in this 6 months. I do not know in which quarter it is going to be. It is possible to get an ATLAS squadron at the rate of ——— starting January 1963.

Mr. THOMSON. You can get missiles.

Mr. GARLOCK. I mean the whole thing.

Mr. THOMSON. With regard to the computers and the other stuff that they are putting in at Warren now, is there any problem of turning that out a little faster?

Mr. GARLOCK. We have gone over that and our analysis is—about the best we can do is——

Mr. THOMSON. Can they make the computers faster if we want them? What element can they not make faster? Would it cost more money if they made it faster?

General BRADLEY. The construction program is the one with the longest lead time.

Mr. THOMSON. It is the actual work of putting in the brick and mortar.

General BRADLEY. Yes.

Mr. THOMSON. Fuller Co. got out the work real quick. A contractor from Mississippi came in and got the bid on the second squadron at Warren. Fuller is ready to go to work. Why cannot they start on another base?

Mr. FLOOD. The point I am trying to make is it is the most frustrating thing in the world to sit here, as long as we do, and see that what always comes out of the Pentagon is what the Pentagon thought Congress meant, never what Congress actually said it meant. And there is always this presumption and this impertinence, but just to say Papa knows best, this is what you really meant.

Mr. THOMSON. Would not the gentleman agree with me that what then came out the committee a year ago was what the Air Force said then was best for them?

Mr. FLOOD. We acted on their advice of course. We do not know. We depend upon this information and base it upon what they tell us, we act and then it never happens. Something else comes out the other end of the horn than the noise that we put in it.

ATLAS-TITAN PROGRAMING

Mr. FORD. I do not like to put a damper on this conversation that has been going on, but as I remember, and I believe the record proves it, the Air Force program at the time of the hearings last year was — ATLAS squadrons and 11 TITAN squadrons.

I am informed by the testimony before this committee this year that the only member of the Joint Chiefs of Staff who subscribed to that program was General White; that the other members of the Joint Chiefs of Staff did not subscribe to the 9 and 11 squadrons. That may well have been one reason why the program was not pushed any faster.

Mr. FLOOD. The other reason was because of the controversy that began in this room as to the quality of the TITAN and the ATLAS program that my friend from Wyoming has been developing for half an hour. That is what got in the way, or I think we would have bought a package. But somebody inadvertently mentioned something about the TITAN, one of the long-haired research and development boys, and that messed up the whole operation for the next 2 weeks, or we would have bought it and everything.

Mr. FORD. I do not want the record to show, because I do not think it is true, this was a program that had the unanimous approval of the Joint Chiefs of Staff because that is not true.

Mr. FLOOD. I do not say that, and it would not interest me anyhow. The opinion of the Joint Chiefs of Staff I have downgraded after I have heard what they have failed to do on many important things, and what they have done on some others, so that does not impress me except as the record speaks for itself.

Mr. GARLOCK. Here [indicating] are the first six squadrons of TITAN that will be liquid oxygen. Then we start getting the noncryogenic fuel and the in-silo launch. Here are the four ATLASES and that closes up the gap.

Mr. FLOOD. What happens if you miss on that last TITAN?

Mr. GARLOCK. If we miss on any of these, this will slide across this way [indicating].

Mr. FLOOD. Can you move up into ATLAS?

Mr. GARLOCK. I do not think there would be any possibility of moving these [indicating]. If by any chance we have problems that will delay this one [indicating], there is still until next summer——

Mr. FLOOD. You could move that missing TITAN up and get it into ATLAS?

Mr. GARLOCK. This one [indicating] could be an ATLAS. It would probably mean these [indicating] would slip a little. The point that I would like to make to the committee is we have a program that is still fluid. We have a 27-squadron program. We have the MINUTE-

MAN coming in here [indicating]. We are double backstopped on that. As General White has said, if that were to slip in the next few months we have a backup. We can pick up additional ATLASES. So we have the three missiles and the total program and the capability of getting what the technicians can turn out as the best system and the best missile capability of getting what the technicians can turn out as the best equipment and the best missiles in the time, and keeping as much time as possible to make final commitments as to exactly which missile we will have.

Mr. FLOOD. My mind is clear about that. The second part of my question was—and this may be out of your shop, but somebody ought to know—what do you expect the Russians to do during this same period of time? It is like the little fellow who went into the barroom. He walks up and down the bar and he says to everybody at the bar, including the bartender, "I am going to hit you with a glass." The big fellow says to him, "While you are doing that, what do you think I am going to be doing?"

We are talking about closing up the missile gap. You are not suggesting that the Russians progressively are standing still, vis-a-vis our operation? Do you say you are moving faster than they? Are you more progressive than they? Are you doing better than they? Are you doing more than they? How are you going to close the gap? I am talking about missiles. Do not talk to me about the bombers and "balance," please. Please do not say "balance" again or "mix." Let us talk about these pigeons.

General WHITE. We expect the Russians to build more missiles in this time period than we.

Mr. FLOOD. Well, there is no closing up. Each side is getting more in direct ratio to your status as of this time last year, so to use numbers that do not mean anything, he has 100 and you have 33⅓, so you move ahead and when he has a thousand you will have 333, if that makes anybody feel any better. Then you reach the overkill point and the whole thing is academic. He is moving ahead certainly as fast as you, so even though you are doing all these things you are doing, even though you are putting these holes in the ground and building these silos and you have the ATLAS and the TITAN, the MINUTEMAN and mobility and hardening, and the whole package, we must believe, crystal balls or intelligence or anything to the contrary, he is progressing as fast as we, which would maintain the ratio of the spread, would it not?

General WHITE. I certainly agree that he is probably moving faster than we now. When we get into the MINUTEMAN program there is a question about that.

Mr. FLOOD. Only a question.

General WHITE. Only a question, yes.

Mr. FLOOD. You have reasonable cause to believe that ICBM's of the Russians are liquid fueled. It is unlikely that they are solid fueled?

General WHITE. I think we have reason to believe that they are liquid fueled.

Mr. FLOOD. Of course you do. You have reason to believe, from all the circumstances, from his record of performance, and from your intelligence, that he will do with solids probably as you?

General WHITE. That is a fair assumption, I think.

Mr. FLOOD. A fair assumption under all the circumstances. That being the case, if there are advantages in solids—and that is why you are going into them—he has realized that there are the same advantages; therefore, all things considered as being equal, his second generation of ICBM's will be just as good as yours, and possibly better and with solids, so we are right back where we started in the second generation. Everybody has more but the ratios are diametric.

General WHITE. I do not think the ratios have to remain static.

Mr. FLOOD. They do not have to be, but is this not the fallacy of the major premise: I still have a syllogism. I come out at the end just where I started, that must be, unless you want to inject something nobody has heard yet. What is the premise that I never heard? Where are we going? Where are we going to end?

General WHITE. We have to end up where, with the warning we will have, we can wreak unacceptable destruction on him.

Mr. FLOOD. I am not talking about a missile race now, missile for missile, never mind that, never mind balance, just the thing I am talking about. Where are we going, second generation, solids, mobility, hardening, no matter what happens, on intelligence, on reason, whatever happens, the ratios will remain the same unless you want to suggest an element that nobody has heard yet. There is none, is there? Not known to us. Is there?

General WHITE. On the basis of sheer manufacturing probabilities and capabilities, I would say that is so. Whether he does it or not, which is not part of the premise, is a question.

Mr. FLOOD. Unless there is an act of God injected into this equation, I have stated it, have I not?

General WHITE. I feel that is true.

Mr. FLOOD. That certainly pulls the rug out from under all this whole business; so no matter who does what, the status quo maintains itself vis-a-vis Defense posture until you want to "balance" things with "balanced forces."

General WHITE. A technological breakthrough.

Mr. FLOOD. Or an act of God or the common enemy.

Mr. FORD. Will the gentleman yield?

Mr. FLOOD. Yes.

Mr. FORD. I think you failed to crank in one factor.

Mr. FLOOD. That is the one I am looking for, the missing link.

Mr. FORD. It is the factor of the POLARIS missile system.

Mr. FLOOD. The U.S. POLARIS missile system. My premise embraces a Russian POLARIS missile system. I am taking step by step. You say, "There ain't no such animal." I do not have that crystal ball. Add POLARIS, add dollars, add missiles, add anything, and I come out where I started, with a different set of figures, but the ratio, the posture remains static.

Mr. THOMSON. If the gentleman will yield, that is not quite according to the best information given to us. The best information is that we will have by certain date 144 POLARIS, and the reason we think they are going to have same is (1) we think they would like to have it, and (2) if they tried real hard, they might be able to get it.

Mr. FLOOD. That makes me very uncomfortable in Wilkes-Barre.

Here is a statement from the Washington Post, UPI story, January 23, Oklahoma City, in which Mr. Sharp spoke and is alleged to have said, and I quote: "As for the missile gap, I am not sure it exists." Are we telling the chambers of commerce throughout the country that? That is the Secretary of the Air Force. "As for the missile gap, I am not sure one exists." That is not true, in simple Elizabethan, is it?

Dr. CHARYK. I would think it would be more appropriate to have the Secretary provide the answer to that.

Mr. FLOOD. I do not care what you think. I am talking to the general.

General WHITE. He says he is not sure. I do not think anyone is sure what the Russians are doing, to start with. I will take that minor part.

Mr. FLOOD. Do you want to let it rest on that? Nobody should do better than that. Listen to this fellow, Doctor, and you will wear stars. Nobody could possibly give a better answer.

(The information will be included in a later volume of these hearings.)

Mr. THOMSON. Will the gentleman yield?

Mr. FLOOD. Yes.

(Discussion off the record.)

Mr. FLOOD. That is the first time I ever heard that.

Mr. THOMSON. The gentleman must not have been here when General Twining presented the intelligence.

Mr. FLOOD. If there is any record here showing that, or anyplace, or if the Secretary of the Air Force and the Secretary of Defense and all the Joints Chiefs of Staff want to take the record on my time and establish your premise, I want them to do it. That I want to hear. I want you to close this gap for me. You go ahead and do it. That I want to hear. Take all the time you want on the record, and if you are going to close that with some more semantics or gymnastics, you go ahead and exhibit that one.

Mr. MAHON. For the record, at the point where the question was asked and where it was said that the Secretary would provide an answer, I hope space will be left and I would like an answer provided on the point raised.

Mr. FLOOD. Since I mentioned his name, I think that is quite proper, but I was concerned about the General's reaction and, of course, he reacted as General White reacts. General White is fast on his feet. That is all right. He did not win those stars in a poker game. That was a good answer under the circumstances. I do not know what else he could say.

ADEQUACY OF AIRLIFT

Here we go again, General. For 5 years I have charged your Air Force is not proper, not adequate to meet the contingencies I have always posed. I pose them again, only it is 1960 now—5 years later. You need a new kind of aircraft, a new kind of propulsion, even a new air world; with new wars, your gap is now impressing you. You have a balance of power. So nobody is going to throw nuclear bombs. Now you have an impasse which invites limited war, which invites transport. I charge that the airlift for the transport of marines and

ground troops of the Army is inadequate, that you cannot transport within 14 days to the Suez and to Jakarta at 9 o'clock on the same morning two divisions, one in each direction, and supply them in 14 days with hardware. You do not have the aircraft; you do not have the right kind of aircraft, you are not programed for it, and there is nothing in this budget I have seen to indicate you have changed your position. Where are we?

General WHITE. I would like to address that problem. As you have stated, you have heard it a good many years. The airlift presently available meets the criteria established by the Joint Chiefs of Staff. I would like to point up in defense of the Air Force because we are constantly having these allegations thrown at us——

Mr. FLOOD. Every year.

General WHITE. Every year. While we, particularly the flying side of the Air Force, are as anxious as anybody to have aircraft where aircraft are needed, we have, as Mr. Thomson has pointed out, not only a technological problem but a personnel problem and a forthcoming morale problem.

I would also submit that under the guidelines and total Defense budget that is provided, I stand on record that the most important mission the Air Force has is the strategic retaliatory force in spite of the very erudite computations you made on a balance of deterrents. Nevertheless, that is the No. 1 requirement.

I would also say that a proper air defense of this Nation is of a very high order of importance and a very large money and personnel requirement thereby levied on the Air Force because we do carry the burden of that mission.

In addition to that, we have the tactical strike missions in support of the Army. We have the airlift mission. We simply cannot, within the guidelines we are given and within the stipulations directed by the Joint Chiefs of Staff as to requirements, manufacture a requirement. We are just as keen from a subjective point of view as could be to have more airplanes, particularly bigger and better airplanes.

If I could perhaps go a little far here and state a personal opinion, I sometimes from where I sit—and it is entirely subjective, but in the light of the conversations we have had here this afternoon, I think it would be in order to say so—I sometimes think that the Air Force is impairing its own future by virtue of standing for the Nation in those very important roles which I have stated. They take an enormous part of our budget. Yet at the same time we are accused of not providing the airlift. There are even suggestions that the airlift functions should go to some other service.

Mr. FLOOD. What is the matter with that? If you do not want it, give it away; if you are busy with something else, give it to somebody else.

General WHITE. I say we want it and cannot get it within the budget guidelines and within the priorities. The only way you do that is add more money to the budget, change the priorities, and I am again stating my honest convictions that the Air Force is the most competent service to handle the airlift.

I think the record of safety, the worldwide network of airbases and air routes, I would cite that MATS is the greatest carrier, by air, of personnel and cargo in the free world. Further, they completed this

year without a single casualty. I think the record of the professionalism of the Air Force in airlift stands for itself.

Therefore, if there is to be more airlift, the only question is to establish a requirement for it, and provide the funds. If those funds are forthcoming, I think on the basis of the record they should come to the Air Force. That is something I have long wanted to get off my chest.

Mr. FLOOD. You have not answered anything. As I have said here many times before, in law school the dean would ask me a question, I would take 15 minutes to answer it, he would say, "Mr. Flood, you have stated the question better than I did." You have merely restated professionally the question that I asked as a layman. That is the situation. You are busy with other things which are more important to you, you think there is no requirement, you have not got enough aircraft, you have not got the right kind anyhow, there is not enough money, and so we cannot do it.

General WHITE. What I am saying is that an agency of the Government, of the military, that would be able to justify more airlift would have to get to do it in the normal and, I think, orderly procedure, get the statement of the Joint Chiefs of Staff that more airlift is required.

Once that is done, the funds have to come from some place. If they are forthcoming, I say on the record of professional competence they should come to the Air Force. That is the burden of my statement.

Mr. FORD. Will the gentleman yield?

Mr. FLOOD. Yes.

Mr. FORD. Is there any change of requirement in airlift as far as the Joint Chiefs of Staff are concerned, comparing this year to last year?

General WHITE. I am aware of none except we did go through a series of hypothetical limited war examples to check what might be available if it were allocated that way. We came up with the conclusion that limited war variations were so infinite that you could not state a simple limited war requirement for airlift and that a hypothetical case was not one and never has been one upon which you can justify military requirements.

Mr. FORD. In other words, the requirement as stated by the Joint Chiefs of Staff, comparing last year with this year, is the same?

General WHITE. It is about the same.

Mr. FLOOD. Will you have your doctor's people tell us why we cannot recover boosters on these R. & D. shots and save a lot of money on recovering boosters? Put that in the record.

(The information will be included in a later volume of these hearings.)

BASING OF IRBM'S IN ALASKA

Mr. FLOOD. I want two operational units of JUPITER in Alaska. Why can I not have them? That is up to the general. Why should I not have them? Keep in mind what the Russians have———they are loaded, they have two, my intelligence indicates, zeroed on Alaska and ICBM's zeroed against the continent. Two JUPITER, two, 1,100-mile and 1,400-mile Russian IRBM's———zeroed on Alaska just eliminates Alaska. That is the end of it. I know about bombers at Omaha———but I am not talking about that. I am on the other side. I have always disagreed violently with the Air Force THOR

program. I think it was a deliberate effort to counteract the Army JUPITER program. I think it was unnecessary, the sheerest duplication, and I quetsioned its performance from the beginning. Anyhow, that is all over with. I think the Air Force has downgraded JUPITER when you were given the IRBM mission. That is your business. I think you were wrong.

I want JUPITER to be a mobile field missile for the Army. I want 10,000 pounds in Army aircraft to spot for them. Tell me why I should not have it.

(The information to be supplied follows.)

The real question here is whether basing IRBM's in Alaska has a net advantage over basing ICBM's in the interior of the United States. The job in either case is to deal effectively with the overall Soviet threat, including that portion of the threat based on the Kamchatka peninsula. Over the past 2 years several studies have been made on this problem. These studies show that ICBM's based in the interior of the United States can do this job better and cheaper than IRBM's based in Alaska. The reasons why IRBM's based in Alaska are not as effective is due to the increased prelaunch vulnerability, higher total system costs, and logistic support problems.

IRBM's are basically designed for employment against fixed targets of ranges from 300 to 1,500 miles from the missile location. The value of an aircraft to locate targets of opportunity is not questioned. However, it would appear more logical for an aircraft, after penetrating the enemy defenses to the ranges indicated above, to attack the target of opportunity with armament carried by the aircraft itself rather than act as a spotter for missiles some distance away.

Aircraft for the Air National Guard

Mr. Flood. Tell me more about the planes for the Air National Guard, or lack of them.

(The information to be supplied follows:)

Aircraft for the Air Guard

The flying squadrons of the Air National Guard are equipped with aircraft in the same quantities per unit as like Air Force squadrons. The inventory is composed of F–84's, F–86's, F–89's, F–100's, and RB–57's in the jet category. Conventional aircraft equippage includes C–47's, C–119's, and SA–16's.

Recent Air Force actions will provide the Air Guard with F–102 aircraft and also with F-104 aircraft which will materially aid in modernization of the Air Guard inventory. A new mission is also being introduced into the Air Guard, that of strategic airlift, and C–97 aircraft will be furnished for this purpose. These actions represent a continuous effort on the part of the Air Force to maintain modernized Reserve Forces.

This does not represent additive units to the Air Guard, instead it is reequippage of existing organizations.

SPACE-MILITARY POTENTIAL

Mr. Flood. In view of a statement made by General Schriever—I will get to him himself, but I would like from your level a clear statement on the relationship of space to the military potential. Secretary Gates made it pretty clear they were a separate breed, although ultimately they would be an advantage. I insist they are Siamese twins, that you cannot take them apart now or any other time. I am diametrically opposite to the Secretary on that.

Mr. Mahon. We could point out for the record at this point that I believe Dr. Charyk made a very meaningful statement on that issue this morning.

Mr. FLOOD. I think that is true, but develop that premise in which I find myself at odds with the Department again. That is all, Mr. Chairman.

(The information will be included in a later volume of these hearings.)

Mr. FLOOD. Dr. Charles Valley, Jr., Chief Scientist of the U.S. Air Force, made a statement to the Air Force Association's Third Annual Jet Age Conference at the Sheraton Park Hotel here in Washington a few months ago in which he stressed the absolutely necessity of utilizing live missiles of all categories from top to bottom to be used by the troops for practice and not fire mocked-up or fake missiles. He used the analogy of an orchestra, that you cannot practice on violins without strings and, therefore, the troops must use live pigeons—by that, meaning missiles. I have that article. Would you have that developed further, please?

Dr. CHARYK. I might clarify this. I think that must be a couple of years ago, at the time Dr. Valley was the chief scientist of the Air Force.

Mr. FLOOD. It just came out now, but it might be a referral back. If he is not the chief scientist now, that is one good reason he should not be, but if anyone else has the same idea or a different idea, we would like to hear how many ICBM's you are going to practice with, or IRBM's or whatever you have.

AIRCRAFT SAFETY

Mr. MAHON. This morning off the record we discussed the problem of aircraft safety in the Air Force. We had some general discussion. I wish you would prepare a paper in response to these various questions which were raised this morning, submit it to the committee, which we will probably want to put in the record at this point.

General FRIEDMAN. We will do that, Mr. Chairman.

(The information will be included in a later volume of these hearings.)

FUNDS FOR CONTRACT MAINTENANCE WORK

Mr. MAHON. This morning we discussed briefly a matter of funds being expended for contract work or a certain type of contract work within the Air Force. What do you have on that?

General FRIEDMAN. I find our current financial plan contains $296.5 million for purposes of contract maintenance work, depot maintenance work. As of December 31 our obligations show at $185.8 million. We have comimtted $232.1 million. We have initiations totaling $269.8 million. As to the remainder, I see no problem in getting on through to initiation and obligation of the total amount I previously specified before the end of this year. I am unable to reconcile the figure of $331 million, with $108 million of that amount required for obligation. Apparently there has been progress in going to contract since the time of that report.

Mr. MAHON. I am not advocating any particular procedure at this time. I am undertaking to develop what the picture is. When we have operation and maintenance people before us, we may want to go into this matter in more detail. Before this record is printed, I will want to interrogate you further. I will want you to perhaps supply

additional information for the record. I am not sure whether we put anything on the record this morning.

General FRIEDMAN. Yes, sir, it was put on the record.

(The matter referred to appears on page 361.)

AIRCRAFT AND CARRIER EXERCISE

Mr. MAHON. General White, a very eminent writer wrote a piece sometime ago, I think about a week ago, with respect to war games in which the tactical aircraft had participated with carriers. Are you familiar with that?

General WHITE. I am quite sure I am, sir. I know the exercises.

Mr. MAHON. When was this exercise?

General WHITE. I would judge it was about 6 weeks ago.

Mr. MAHON. What was the purpose of the exercise?

General WHITE. The purpose of the exercise was a systems test on behalf of the weapons systems evaluation group in which certain of the Navy's aircraft detection systems were to be tested in cellular form, shall I say. It was specifically stated in the Joint Chiefs of Staff directive and further elaborated that the purpose of the exercise was in nowise to be considered a contest. It was not intended to prove either that carrier task forces were vulnerable to air forces nor that carrier task forces could intercept or shoot down attacking aircraft.

For that purpose a finite number of aircraft were to be furnished by the Air Force with special black boxes to simulate the kind of black boxes that the Soviet Air Force would have. They were provided in a limited number of aircraft. The exercise was completely "canned" in order to give a technical evaluation of the capability of these particular systems aboard certain vessels.

Unfortunately, publicity, making it appear to be a contest, appeared in many places in the press.

Mr. MAHON. What did you learn of significance from this test?

General WHITE. The report of the weapons systems evaluation group has not been issued, or if it has, it has not come on the Joint Chiefs of Staff agenda because I have not seen it. It takes them some time to digest and work up their findings and recommendations.

Mr. MAHON. Just from preliminary estimates, do you know approximately?

General WHITE. No, sir, I do not.

Mr. FORD. Mr. Chairman.

Mr. MAHON. Mr. Ford.

Mr. FORD. Was the exercise carried out to the conclusion of its objectives as far as the operation was concerned?

General WHITE. I am certain that is the case.

PROBLEMS OF RADAR IDENTIFICATION

Mr. MAHON. General White, a number of discussions have arisen in recent years with respect to the need for identification of the opponent in the event you appear to be in an emergency stage. It has been said that indications show up on electronic devices indicating planes are in the air and probably even missiles are in the air when, as a matter of fact, an investigation determines that there were no planes

and there were no missiles, that this was some sort of atmospheric condition which brought about the appearance of objects. Do you foresee a continuation of that kind of problem?

General WHITE. I think that type of problem will become less and less. I am not a technician in the field, and I would certainly like Dr. Charyk to chime in.

First there was the advent of radar itself, then the improvements, much more high-powered radar, higher envelope, and so on, and more sensitive—those things have made it possible to pick up clouds, birds, temperature inversions, and that type of phenomenon which has caused much trouble in the past. We are now familiar with these things and that type of incident has been greatly reduced.

I would anticipate, however, that there will be a problem of that nature initially when the BMEWS becomes operational not only from that type of phenomenon but new types of things in space, such as meteors, and so on, and many of those things are going to have to actually be cataloged electronically so when they appear again the mechanism will cancel them out and not show them, or at least show them as being what they are.

Mr. MAHON. I may have floundered a bit in my language because I am not sure how I should phrase these questions. You will recall that it has been said many times before us that an ICBM is not recallable but a bomber can start on its mission and can be recalled hours later. Let me have another try at this.

We have heard at other times some discussion of the problems encountered in making positive identification of images on air defense radarscopes. Let us assume we have a sizable missile force in being and that BMEWS is active. If a number of suspicious and unusual objects are picked up on the scopes apparently traveling in our direction at the estimated speed, would we propose to fire our missiles on the basis of this information, or would we wait until we were actually hit?

General WHITE. I think that is one of the $64 questions of this age, sir, and is the basis for one of my very strong feelings that we must have manned aircraft well into the future for the very reason that the time element is going to be so short that to make the decision to push the button to launch the missiles may be very critical; whereas, the commander of the Strategic Air Command, under the positive control system which we now have in effect, can immediately launch his bombers when the very first indication arises. He will get his bombers off. Under positive control they can only go a certain distance before they must come back unless they get a positive signal to go ahead.

Mr. MAHON. We do not have self-destructing gadgets on our missiles which would make for self-destruction far off on their mission, do we?

General WHITE. Once the warhead is separated—and I am not sure even of that range or the destruct signal.

Dr. CHARYK. There is no destruct system.

REPROGRAMING OF ICBM FUNDS

Mr. MAHON. Mr. Secretary, I refer to a report on reprograming as of December 15, 1959. This report indicates that $48.5 million of the additional $85 million which was provided by Congress last year for

the acceleration of the ICBM program will not be used during fiscal 1960. We were told last year by the Air Force that the total sum of $85 million could be used to expedite the ICBM program. My question is: What happened?

General FRIEDMAN. Sir, the $85 million was used for the ATLAS program. The reprograming report to which you refer indicated the net effect of the additional $85 million and certain program changes and management actions which reduced costs by $46.2 million. The $85 million add-on was used in the following fashion:

For engineering for the 100-pound-per-square-inch missile and its accompanying ground-support equipment, $23 million. GSE, ground-support equipment cost, to convert the eight and ninth squadrons to 100 pounds per square inch, $16 million. GSE cost for 100 pounds per square inch, operational suitability test facility, $24 million. There was a requirement for $7.4 million for ground-support equipment at the Patrick stand in Florida. General development and production support cost another $8.7 million. The training equipment for the squadrons 10 through 13 was $6 million; a total of $85.1 million.

During the course of the period from the first of the fiscal year to the 15th of December we were able to examine the program and effect programing changes permitting a reduction of $46.2 million below our original estimate. I can recite the specifics on that if you desire.

Mr. MAHON. Please put that in the record.

General FRIEDMAN. I will make a complete reconciliation.

Mr. FORD. Will your comments show that extra $85 million did have an impact as far as speed-up of the program is concerned?

General FRIEDMAN. They certainly will, sir, and they will tie to the program which Mr. Garlock presented earlier in the hearing. We will tie that to it specifically.

Mr. FORD. That will be clearly brought out in whatever comments you put in the record?

Mr. FLOOD. That is what I was probing for with Mr. Garlock, precisely that.

(The information will be included in a later volume of these hearings.)

DESTRUCT CAPABILITY IN TEST AND MILITARY ICBM'S

Mr. THOMSON. Just to have it complete in the record at one point, I think maybe we are talking about two different things. On your test missiles that are fired down at Canaveral or Vandenberg you have a destruct capability; is that correct?

Dr. CHARYK. Yes.

Mr. THOMSON. You can destroy them?

Dr. CHARYK. Yes.

Mr. THOMSON. For how far out can you destroy them?

Dr. CHARYK. Of the order of 400 miles.

Mr. THOMSON. Only 400 miles?

Dr. CHARYK. Beyond that it is on a ballistic course and is not capable of destruction unless special provisions are made.

Mr. THOMSON. Could you make special provisions?

Dr. CHARYK. It would involve carrying some sort of destruct system in the warhead proper, which could be done.

Mr. THOMSON. It would not be complicated, would it?

Dr. CHARYK. I do not believe so.

Mr. THOMSON. You could send a radio impulse or something to it to cause it to blow up?

Dr. CHARYK. Yes.

Mr. THOMSON. How much would you estimate it would cost to build that destruct capability into an operational missile?

Dr. CHARYK. I would not have a very good estimate on that because it would depend upon the specific approach that one used, and in the case of operational missiles the problem would become fairly complicated in insuring that the right type of signal reached the missile.

General WHITE. And, moreover, that it would be our signal and not that of the enemy.

Mr. THOMSON. You have a destruct capability in the test missile. How much does the test missile weigh that you destroy?

Dr. CHARYK. The destruct system in the test missile?

Mr. THOMSON. The whole missile.

Dr. CHARYK. The whole missile in the ATLAS is 260,000 pounds, in that order.

Mr. THOMSON. Your warhead is ———?

Dr. CHARYK. On that order.

Mr. THOMSON. So the same thing that is built in to destroy the missile itself, could that not be used to destroy the warhead, too, if a warhead was on it?

Dr. CHARYK. If you wanted to destroy the warhead before the separation of the warhead from the missile, I am sure the destruct system of the missile would do a fairly effective job on the nosecone.

Mr. THOMSON. The point I am making is that it seems to me as I went through this, if we had a destruct capability—I will ask this question first: What does the destruct capability cost on a test missile?

Dr. CHARYK. I do not have that.

Mr. THOMSON. What is the difference in cost?

Dr. CHARYK. We can provide the cost of the destruct system.

Mr. THOMSON. Is it nominal?

Dr. CHARYK. I think it is quite nominal.

Mr. THOMSON. If it is nominal on that, if you could build a destruct capability into a missile so you could destroy it as it goes toward the target, then you would have in effect the ability to call it back, so to speak.

General BRADLEY. About 5 minutes.

Mr. FLOOD. If it was a hydrogen warhead, you have fallout in your own territory.

Mr. FORD. Will the gentleman yield?

Dr. Charyk, if you had a destruct capability in an operational missile, how much more time would that give you to make any decision?

Dr. CHARYK. In the first 450 miles, it is less than 2 or 3 minutes.

General WHITE. You can work it back this way. If you were able to do it clear up to the point of impact, you would have 30 minutes. I think you would have great difficulty reaching that far, to start with.

Mr. THOMSON. Would you not then have more time to make up your mind before you pushed the button? As it is now, you push the button when you send that airplane off and it takes it all this time to get there; whereas, a missile gets there in 30 minutes. You could think about it a lot longer before you wasted all that jet fuel.

General WHITE. It is an interesting point. I would not like to be on the receiving end even if we had a 90 percent probability of destroying all such warheads because the 10 percent that land are going to start the war anyhow. I think it is a very complicated problem, both from a tactical point of view and from a technical point of view.

Mr. THOMSON. How many failures have you had in the destruction of a test missile when you made the decision to destruct?

General WHITE. I think we had had none, sir; but there is a vast difference. One time you are destroying a balloon-like case and the other time you have got an almost solid warhead to destroy.

Mr. FLOOD. We pursued this at some length several years ago on the destruct on a warhead, and everybody seems to have abandoned all hope for it.

Dr. CHARYK. I might add this one point to help clarify the record. There is an important arming function for the warhead which does not occur unless everything has performed perfectly up to that point.

Mr. THOMSON. I was going to mention that. Before you get this big explosion of ——— you have to have things work properly, it just does not go off on point detonation, does it?

Dr. CHARYK. No.

Mr. THOMSON. If you destroy one of those things in the chain of events, you get no atomic explosion?

Dr. CHARYK. That is correct.

ICBM COUNTERMEASURES

General WHITE. There is one important thing I barely touched on and that is you open yourself to enemy countermeasures as soon as you do that because he might well have your signal, too.

Mr. THOMSON. He has some real good countermeasures on those bombers; has he not?

General WHITE. He has them on the bombers.

Mr. THOMSON. In fact, we do not have a countermeasure on their ICBM yet.

General WHITE. Neither side does on ICBM's.

Mr. THOMSON. Then he does not have a countermeasure now?

General WHITE. No; but we do not have the device either.

(The following additional information was furnished for the record.)

I would like to add here that from an operational viewpoint we don't want or need a destruct capability on our combat missiles. We should only fire them when we are certain an attack is in progress. We could not afford to fire them—knowing we might have to destroy them ourselves if the warning proved to be false. To do so might mean that we would needlessly exhaust our inventory of missiles, thus seriously degrading our deterrent.

AIR FORCE PLANNING BASED ON ATTACK BEFORE REACTION

Mr. MAHON. General, either on or off the record, in view of the fact that we do not know how quickly we can react, we do not know how quickly our technique of consulting with the President as leader of the country and getting authorization to fire ballistic missiles will work, we do not know for sure what the situation may be, if we are a little vague on that, you might get yourself in a position of just having to wait until we are hit because of inadequate time and facilities to get the facts.

On which basis or assumption have you done your programing in the Air Force, that we would actually be hit before we reacted or that we would have reacted?

Generaly WHITE. Certainly, as of the moment, we have to go on the basis that we would be hit because we have no warning whatsoever.

Mr. MAHON. You say the greatest threat is the air-breathing threat so we would have some warning.

General WHITE. Air-breathing threat, but we do not have a comparable problem.

Mr. MAHON. During this critical period of the ICBM gap——

General WHITE. I am sure the first we would know, until we have the BMEWS in operation and proven out, the first thing we would know about it is when a warhead struck.

Mr. MAHON. I assume then we are planning our defense accordingly.

General WHITE. That is correct, sir.

Mr. FLOOD. May I add, Mr. Chairman, of course it could happen any minute because we think he has a certain limited number available to fire, theoretically or actually.

Mr. MAHON. Are there any further questions?

General WHITE. I would like to add to this last discussion, of course, that is one of the prime reasons for the airborne alert that we have provision for, and if I might before the proceedings end, I would like to ask permission, because in reading the record of the last couple days I feel that the subject of deterrence is pretty well scattered through our testimony, I would like to have permission to insert a statement of my own on that subject.

(The statement referred to appears at p. 233.)

Mr. FLOOD. Do you not feel, General, that if Mr. Mahon's questions were flatly on the point he asked for a specific purpose, but you have also made it clear, I believe, that you expect to have a little more than the situation Mr. Mahon poses, a mere impact, because you would expect political and intelligence buildups, regardless of how short a period of time, which might be additional hours or additional days, which would get your alert up and you would actually have something more than a mere impact, perhaps.

General WHITE. That is certainly one of the things we would hope for, though it would be possible, I believe, to have complete surprise.

Mr. FLOOD. Yes; if somebody had too much vodka and pushed the wrong button Sunday, but otherwise, since they have 10 available, our record should show just exactly all the elements we are considering.

General WHITE. That is certainly one of them.

Mr. MAHON. Our record is getting a little fuzzy here. As I mentioned this morning, there are at times questions raised in which the answers are quite inconclusive because it was not possible for the witness to have precisely the information at hand at the moment. I think when you go through the record you ought to place inserts to make the situation clear in order that the record will be meaningful. Even though no insert is called for, it may be placed in the record. If we look at it and have objection to it, we can discuss it with you and ask that it be modified if necessary.

General WHITE. You would like, of course, to have it indicated where it is inserted.

Mr. MAHON. Yes; unless it is a correction of language or addition of a sentence. I think some of the responses have been most helpful and very well handled indeed, and I think the record will, on the whole, be very good.

General White, I think many of your statements have been very excellent on certain very critical points. I read over some of the transcript yesterday and I thought it was good, but there are places where there is much room for improvement and with respect to things that are important. Let us try to tie this record together in such a way that people who want to find answers can find them without reading all day.

General WHITE. This deterrence was one of the things I noted myself.

Mr. MAHON. Feel perfectly free to insert a statement at this point in regard to your views on deterrence.

(The statement referred to appears on p. 233.)

General FRIEDMAN. We would like very much to do that, Mr. Chairman. Where there is a request for insertion in the record, we do that. Time is one of the things that presses us. There are a lot of places we would like to clarify by insert, but sometimes time does not allow it. Everybody is trying to meet deadlines.

Mr. MAHON. There is always opportunity to make insertions and label them as insertions.

General FRIEDMAN. That is what I had reference to.

Mr. MAHON. Mr. Sikes, who has been very active in these hearings and very interested in the subject matter and who was here this morning, had a couple of questions which he wanted propounded. I will propound them at this time and I think you will have no difficulty in supplying the information.

POLICY ON ABSORBING WAGE BOARD INCREASES

Mr. Sikes first question is: I have noted that it is the policy of the Department of the Air Force to require a reduction in the number of personnel to offset increases which are granted in wages by the wage boards. To me, this is extremely poor policy in that it penalizes some people by taking their jobs in order that others may gain a pay raise. Do you approve of this policy?

(The information to be supplied follows:)

The Department of the Air Force policy is that every effort be made to absorb wage board increases through reprograming actions rather than by reductions in the number of personnel. However, since payment of such increases is required by law, there may arise occasions when such reductions would be necessary due to the overall limitation of funds.

BUDGETING FOR WAGE BOARD PAY INCREASES

Mr. MAHON. The second question from Mr. Sikes is: Do you not consider that it would be more desirable to come to Congress for supplemental appropriations or to estimate the additional wages at the time of your annual budget submission rather than to follow the present policy? Of course, we want you to make whatever economies you can and we do not want you to keep on the payroll people who are not needed. This is not the same as a mandatory reduction in personnel to offset a wage raise.

(The information to be supplied follows:)

It would be much preferable to include provision for wage board increases in the annual budget submission. At the present time this is precluded by the regulations of the Bureau of the Budget although it is felt that adequate data is available to the Air Force upon which to base realistic estimates. Of course, there is authority (Public Law 85–48, June 5, 1957) for apportionment of funds on a basis indicating a need for supplemental or deficiency appropriation to the extent necessary to permit payment of such increases.

FOLLOW-ON FIGHTER-INTERCEPTOR

Mr. FORD. On page 18 of your statement you said:

The F–106 will be the last of the fighter-interceptors unless funds are subsequently programed to pursue the development of a more advanced interceptor-type aircraft.

Was the F–108 the kind of aircraft that would follow on to the F–106?

General WHITE. That is correct, sir.

Mr. FORD. Do you have in mind something now other than the F–108 or are you talking about the F–108?

General WHITE. No, sir; I was talking, of course, about the F–108 but also under review in the Department of Defense as well as in the Air Force is the requirement or, not the requirement, for a long-range fighter-interceptor, and there are alternatives which are under consideration.

Mr. FORD. Besides the F–108?

General WHITE. Yes, sir. None of them, of course, is the equivalent of the F–108, but there are adaptations that some people feel would meet the requirement to a considerable degree.

Mr. FORD. You mean the F–108 either upgraded or downgraded?

General WHITE. Or even one of the proposals, which I believe did not get a very high rating, was the adaptation of the B–58 to the long-range fighter-interceptor role. I cite that as an example of the kind of thing.

MOBILITY OF MINUTEMAN

Mr. FLOOD. Mr. Chairman, Mr. Weaver of Nebraska called me on the phone at 2 o'clock and asked me if I would during the course of my interrogation, since he could not be present this afternoon, ask

you to comment in that part of the examination which was his on the mobility of the MINUTEMAN. He is not satisfied that that has been developed properly. That is, the matter of your intentions for mobility, nature, type, and the kind of mobility, whether rail, truck, combination of both, and also some projection of the mobility of MINUTEMAN.

(The information will be included in a later volume of these hearings.)

Mr. MAHON. Thank you very much, gentlemen. You have been most helpful to the committee.

THURSDAY, JANUARY 28, 1960.

DEPARTMENT OF THE ARMY

WITNESSES

HON. WILBER M. BRUCKER, SECRETARY OF THE ARMY
GEN. L. L. LEMNITZER, CHIEF OF STAFF, U.S. ARMY
MAJ. GEN. DAVID W. TRAUB, DIRECTOR OF ARMY BUDGET, COMPTROLLER OF THE ARMY
MAJ. GEN. ROBERT J. WOOD, DEPUTY CHIEF OF RESEARCH AND DEVELOPMENT
MAJ. GEN. CHARLES B. DUFF, CHIEF, PROGRAMS AND ANALYSIS GROUP, OFFICE, CHIEF OF STAFF

Mr. MAHON. The committee will come to order. We are pleased to have you here, Secretary Brucker and General Lemnitzer and the other top civilian and military people, before the committee this morning.

As you know, we are going to discuss the Army program, the Army budget, Army problems, national defense problems, what has been happening and what we look forward to in the future. We have been talking for a number of years about the size of the Army, strength level, manpower levels I should say, about modernization, about the NIKE-ZEUS, about whether the National Guard should be at one figure and also the Reserves at another figure, or whether it should be lower, more or less a hassel with the executive branch on this issue.

I know that, as always, all of you will give us your best judgment and all the information you have on the pertinent issues. The Secretary of Defense and General Twining appeared before us as the first witnesses from the Pentagon. They made very forceful statements in regard to the prowess of the United States and the sufficiency of our defense program. Since they were here, we have heard from officials of the Navy, who are not so sanguine with respect to the program. The Air Force likewise spent some considerable time telling us about what the Air Force did not have that it would like to have.

We wonder if you are reasonably well satisfied with the Army program and if you feel we should support it wholeheartedly and with full confidence. I believe the best thing for us to do is proceed and hear your statement, Mr. Secretary, and then the statement of General Lemnitzer. Then we will have an interrogation period after that. Will you proceed, Mr. Secretary?

Secretary BRUCKER. This statement is a little on the long side but it is the only way we could get it to you.

Mr. MAHON. We are not interested in brevity. We want the facts.

GENERAL STATEMENT OF THE SECRETARY OF THE ARMY

Secretary BRUCKER. Mr. Chairman, members of the committee, I welcome this opportunity to report to you on the status of our Army, because I feel that the role of the Army in national security is rapidly evolving in a manner which must be clearly understood by the Nation. I will highlight progress in the Army over the past year and outline the broad aspects of Army programs for the coming year. I will also touch on the effect of the fiscal year 1961 budget on future programs, since the impact of current decisions on the future posture and capabilities of the Army is of vital importance. The Chief of Staff, General Lemnitzer, will discuss in more detail the Army's military composition and deployment, especially for fiscal year 1961.

These are challenging times for the United States. There are, on the one hand, encouraging developments. The recent visits by President Eisenhower, constituting a diplomatic achievement of the first order, produced indisputable evidence of a deep and widespread faith in America and American leadership. This is a trust we cannot fail. We hope that the forthcoming "summit" meetings will provide an opportunity for us and our allies to achieve important advances toward a more stable international atmosphere.

There are also, however, developments which are less encouraging. Basic to any consideration of the problem of national security is the nature of the threat posed by the communistic bloc, current Soviet propaganda notwithstanding, there is no reason to believe that Communist objectives have changed. We must recognize that the Communist threat, characterized by constant pressure, applied in many areas, and utilizing all forms of power—military, economic, psychological, political—has in no material way abated. On the contrary, it has in important respects increased. The recent announcement by Mr. Khrushchev that Soviet Armed Forces will be reduced in strength over a period of 2 years was accompanied by boasts that the firepower of the Soviet Army would remain such as has "never been possessed by any army before." Even if the announced strength reductions are implemented, Soviet ground forces, not to mention those of the entire Communist bloc, will remain massive. And there is ample evidence to support the boast about firepower.

The point I make is simply this: To exercise our leadership, and to retain our ability to influence the direction of world affairs, we must be able to operate from a position of strength. Military power which is both adequate and responsive to all aspects of the threat is an essential foundation without which no other instrument of national policy can be truly effective.

Military power, and the threatened use of military power, have long been basic elements of Sino-Soviet bloc strategy. Of late, however, this military element of the threat has been both expanding and changing in nature. Of particular concern is the emerging ICBM capability on the part of the U.S.S.R. which, combined with the still

large and increasingly modern and effective Communist land forces, has implications even beyond the possibility of a direct missile attack on the United States or any of its allies. That is, based on their actions in the past, the possibility also exists that the Soviets will attempt to exploit effective nuclear parity in several related ways: as a counterdeterrent against our own retaliatory capability; as a device to blackmail us or our friends; and most significantly, as a strategic shield behind which they may make or support aggressive military advances, short of general war, in many parts of the world.

I returned last week from an extended trip through southeast Asia and the Far East which, of course, is the critical area of the world that rings the periphery of Communist China. It is indisputably clear to me from the discussions that I held with the officials and military leaders of these countries as well as the U.S. officials resident there, that there is grave concern over the militant attitude of the Red Chinese.

Thailand, Vietnam, and Laos are making creditable progress in the strengthening of their armed forces, but each recognize that the massive strength of the ground army of Red China, if unleashed in overt aggression, would quickly overpower their combined forces without outside assistance. In addition, most of the countries of southeast Asia, including Indonesia, are still struggling to regain internal security as a basis for further economic and social progress.

It appears that the dissident Communist elements in southeast Asia are being forced to change their tactics to more violent and overt methods. President Diem of Vietnam described this change to me at length. More powerful guerrilla bands are attacking, terrorizing, and killing local village officials who have been appointed by the Vietnamese Government. This tactic has been added to one of small undercover propaganda teams that the Communist Chinese have utilized heavily up until the last 8 to 12 months. This is further indication of the more militant approach the Communist Chinese are now adopting. They have flagrantly violated the Geneva accords in North Vietnam and continue to disregard the provisions of the treaty regarding reinforcements and modernization of forces in northern Korea. If I had to single out one conclusion drawn from my trip, it would be that Red China is like a crouched tiger ready to spring on any prey that is weak and wounded. To have our attention diverted exclusively or unduly to the Soviet threat in the missile field, or to NATO alone, is not realistic, safe, or prudent in the light of the ominous military threat posed by the Red Chinese in Asia.

The Communists could very well be encouraged to undertake even bolder ventures with respect to the so-called lesser forms of aggression ranging from subversion or invasion-by-proxy through rather substantial "conventional" attacks on our friends overseas. If the Communist bloc was not deterred from such pursuits when we had a virtual monopoly on strategic nuclear capabilities, how much less probable it is that they would be deterred in view of the mutual possession of such capability today.

Our maintenance of an adequate and secure nuclear retaliatory capability remains, of course, of primary importance so that an aggressor will not arrive at a deliberate decision to deliver a thermonuclear attack against us. At the same time, however, the existence of massive

destructive capabilities on both sides makes their employment by either side less likely as a rational choice, except under the most dire circumstances. Hence, the use of other, less destructive, forms of military power becomes relatively more likely in any future resort to military force. This requires that the United States, with its allies, possess the necessary balanced, flexible forces, suitably deployed to meet this challenge. It is for this reason that I am convinced the role of U.S. Army forces will grow in its importance to our national security in the immediate future.

It has been established beyond challenge that, in its own interests as well as those of all freedom-loving peoples, the United States must remain closely associated with other free nations of the world in a system of collective security. In the situation we face today, any threat to our friends is an immediate threat to us, since we can be just as decisively defeated through progressive erosion of the free world as through direct attack on this continent. The front lines of American security are along the entire border of the free world or wherever contact may be made between the forces of freedom and those of international communism.

The bulk of the Army today is on that border of freedom, poised, ready for action. Almost half the strength and more than 50 percent of the operating forces of the Army are stationed overseas, giving substance to the great mutual defense system which links the United States with more than 40 other nations.

In Europe and the Far East, American combat units are deployed side-by-side with those of our allies. The presence of the five divisions of the 7th Army in Germany and the two divisions of the 8th Army in Korea is well known. But these divisions, the basic combat formations, represent only a part of the total potential involved. There are also other essential combat and support elements, including potent rocket and missile units, integrated into our corps and armies and providing support to our allies.

Army officers and men are assisting in the training of the equivalent of almost 200 divisions of allied ground troops. The Army furnishes nearly two-thirds of the military personnel comprising our Military Assistance Advisory Groups and military missions. U.S. soldiers serving with our allies provide constant reassurance of our steadfast purpose to fulfill our commitments.

The oversea deployment and commitments that I have just described are appropriately termed the "forward strategy." As another essential ingredient of this forward strategy, the Army created what we call the Strategic Army Corps or STRAC. We place high priority on the battle readiness of this organization. STRAC stands ready at all times to reinforce promptly our forces overseas or to be deployed independently to ther areas where no U.S. troops are now deployed. It is a well-balanced combined arms force built around one infantry and two airborne divisions which can be employed either as a whole or in part to meet the precise demands of any situation to which it is committed. In the event of an emergency, the entire corps is prepared to move out to any part of the world as rapidly as the necessary air and sea lift can be made available.

In addition to STRAC here in the continental United States, we have a ready force of one division (minus) stationed in Hawaii, the 25th

division. The combat readiness of these troops, and their ability to move rapidly within the Far Eastern area if trouble should arise, give material substance to our national intent to preserve the peace in that area.

The three remaining divisions of the active Army are part of our available reinforcement for STRAC which makes up the remainder of our Strategic Army Force (STRAF). These units cannot be kept in as high a state of readiness because of strength limitations and training commitments. Backing up the STRAF, the Army must count upon the immediate availability of National Guard and Army Reserve units for the prompt expansion of its combat forces in an emergency.

Army air defense units in the continental United States are deployed to protect important population and industrial areas as well as to defend SAC bases. This vital contribution to the defense against air attack consists basically of surface-to-air missile units of the highly effective NIKE family.

Having reviewed in broad perspective the current commitment of the major elements of our active Army forces, I will now summarize the modern role of the Army:

Major combat forces of the Army are deployed overseas in those areas of most strategic importance worldwide. The units of our Strategic Army Corps stand ready in this country. These forces perform a multiple role in support of national policy. Together with forces of the other Services similarly deployed or held in readiness, they are first and foremost the cement which binds our collective security alliance together.

Army forces must perform essential tasks in any form of war:

In cold war, our forward deployed forces have a stabilizing influence. The physical presence of the U.S. soldier on the ground provides tangible, unmistakable evidence of the determination of the United States to assist our friends in resisting aggression or subversion, and in preserving liberty. In general thermonuclear war the Army role would include: preventing, in concert with forces of the other Services and our allies, the overrunning of critical land areas and populations; assisting in the defense of the continental United States against strategic attack; and participating in operations designed to insure that the conflict is brought to a successful political solution. There will be much left to accomplish after the initial nuclear exchange. To achieve a favorable conclusion to total war, the necessary control must be established over the land areas and populations involved.

Important as these tasks at the extreme ends of the spectrum of possible conflict may be, the evolving threat which I earlier described highlights the critical importance of guarding against piecemeal aggression which, if not deterred or repelled, could seriously threaten our national security. With our deployed and ready forces, the United States in concert with her allies must be able to deter any form of military aggression short of total war, or be ready to meet it with appropriate force, calculated to end the conflict quickly or to localize and restrict it.

To perform this expanding role, involving widespread deployments and high degrees of readiness, the Active Army has a requirement for

high quality personnel, and also a basic requirement for personnel strength. The fiscal year 1961 budget will provide for the strength of the Army to be continued at 870,000 officers and men, which is the same number as for the current year. The Army has felt right along that this number is marginal and that any diminution of this strength would weaken our oversea deployments and would jeopardize our ability to meet worldwide commitments. Approval by the Congress of this 870,000 strength will assure that the Army will be able to maintain its current readiness posture through June 1961. We will continue to develop the maximum efficiency out of this level of strength in order to carry out the widespread missions of the Army.

The effect upon our Army National Guard and Army Reserve of the expanding Army role has been perhaps even more profound than upon the active Army.

In the past, our mobilization concepts allowed a certain amount of time for training and equipping of Reserve components before they would be called upon to join with the Active Army in defense of the Nation.

Today all of that is changed:

First. The Army Reserve and Army National Guard are actually furnishing nearly two-thirds of the officers corps of the Active Army, with the bulk of the officers coming from the Army reserves.

Second. Army National Guard units are right now manning some of our important air defense installations. In Hawaii, they are taking over the entire function, and in the continental United States, they are performing a significant part of the task.

Third. Six specially selected divisions of the Army National Guard and supporting elements of both the guard and the Army reserve are kept in the highest possible state of readiness to augment elements of the strategic Army force.

Fourth. Army Reserve reinforcement elements for STRAC, as well as for other portions of the Active Army, to include the mobilization and training base, have been brought to a state of readiness which will allow emergency augmentation with impressive speed and efficiency.

Quality in our Active Forces must therefore be matched by quality among our Reserve components—quality in the form of both ready, effective units and ready, effective individuals. The fact that our Active Army, particularly in terms of ready combat forces, is so small relative to the probable requirements of an emergency, means that our Reserve components must continue to maintain an unprecedented degree of readiness. The necessity for quality and readiness is further accented by the planned reduction in paid drill strength from 700,000 to 630,000 in fiscal year 1961.

One significant advance toward such readiness has been made by reorganization of both the Army Reserve and Army National Guard according to the pentomic concept These same considerations provided the primary motivating influence behind the one army concept we are currently stressing.

The Army is endeavoring to utilize to best advantage the resources made available for the execution of its roles and missions.

A tremendous business management responsibility rests upon the shoulders of our military commanders today. Our Armed Forces

are keenly aware of this fact and responsive to the gravity of their responsibility for the conservation of the tax dollars supplies from our national resources.

Speaking in particular for my own service, the Army, I assure you that it is meeting this challenge. We are fully cognizant of the fact that any waste or inefficiency unnecessarily depletes our national resources and directly diminishes our own ability to carry out our mission. We know well that if we are to have the strength necessary to do the long, hard, tough job that lies ahead of us, we must wring the maximum in fighting power from every tax dollar and resource at our disposal.

For this reason, it is increasingly important for commanders and principal staff personnel at all levels to be familiar with modern management techniques and procedures by which the Army programs, budgets for, acquires and controls the use of its resources. One response to the problem has been the operation of the U.S. Army Management School at Fort Belvoir. Its mission is to provide management training to assist commanders and selected staff officers and civilians in the performance of these managerial functions. Over 2,500 top officers and key civilians have attended this school since its first class was assembled approximately 5 years ago.

I propose now to cover the most significant developments of the past year in the fields of manpower, operation and maintenance, logistics, modernization of equipment, and research and development.

MANPOWER

Although modern weapons and equipment must be exploited to the fullest, men of skill and dedication—as well as men in numbers—remain essential to the Army in the accomplishment of its assigned missions, both in war and in the day-to-day support of our national policy. This is true from many points of view; to mention only two: leadership qualities for proper handling of units in the fluid, dispersed combat actions characteristic of modern warfare; intelligence and technical skills necessary to handle the more complicated modern equipment. The Army's personnel system has constantly demonstrated its ability to respond to the quality challenge.

Some of the significant areas which have received and will continue to receive emphasis include the attraction and retention of qualified personnel needed for positions of leadership, combat, and technical skills; the proper classification, distribution, and utilization of available personnel; the education and development of personnel to make maximum use of potentialities and talents; and improvement in the morale and motivation of all members of the Army.

During fiscal year 1959 there was continued improvement in both enlistments and reenlistments. This may be attributed to a combination of many factors including the pay bill of 1958, domestic economic conditions, the reenlistment counselor system, and improvements in the Army recruiting service. Regular Army enlisted personnel represented 73 percent of the total enlisted strength at the end of fiscal year 1959, as compared with 65 percent at the end of fiscal year 1958. We anticipate further increases in fiscal years 1960 and 1961.

Continuing beneficial results have been secured from the program designed to eliminate those marginal persons who were unable to meet

performance standards, combined with preinduction screening—for which the last Congress provided—to reject individuals without aptitude for training. Such selectivity has contributed to a marked decline in disciplinary problems. We have been able to save untold hours of training time which was formerly wasted on inept men. We have been able to concentrate on training more efficient men working full time at the soldier's job.

We will be eternally grateful for the legislation you gave us permitting us to have these screening tests. We have taken out 72,000 of these inept people. It has made a marked difference in the court-martial rate, a reduction of 22 percent; in the AWOL rate, a reduction of 38 percent. As you know, in the last 3 years we have closed four out of five of our disciplinary barracks and now have less than 900 prisoners at one, Leavenworth Disciplinary Barracks.

If we are not moving in on that problem, I cannot tell you any further on it. We have been trying to show our good faith with you by asking and you granted it. That is the reason I paused to add that.

A basic objective of manpower management in the Army is to obtain the highest possible number of operating forces—the combat forces and their direct supporting elements—within its authorized total strength. Success of the Army in its attainment of this objective is indicated by the fact that by end fiscal year 1961, 65.8 percent of the Army's total strength will be found in operating forces. This compares with 62.5 percent in fiscal year 1958 and 58.8 percent during the Korean conflict.

OPERATION AND MAINTENANCE

Operation and maintenance programs provide for the day-to-day functioning of the Army. The activities in these programs are not merely "housekeeping" activities, but are vital in welding together our military and civilian manpower, our materiel and our installations into an efficient military force. Without adequate operation and maintenance programs, most effective use cannot be made of all the resources provided by the taxpayer's dollar. With adequate provision for operation and maintenance a savings is accomplished in the long run.

Unfortunately, this function of operation and maintenance (O. & M.) is often misunderstood and consequently neglected. Adequate provision for operations and maintenance is just as essential as the provision of the guns, missiles or other equipment itself. O. & M. trains and sustains our combat and supporting units and repairs and maintains our equipment and facilities. This program also provides more than 75 percent of the pay of direct hire civilians employed on military functions by the Army. A specific example will serve to illustrate my point:

Unserviceable but economically repairable equipment held in backlog for lack of maintenance funds represents a substantial capital investment which is not making its intended contribution to Army capabilities. Resources devoted to the repair of such equipment pay great dividends in facilitating training with equipment and in improving our materiel readiness to meet an emergency. As our equipment ages, maintenance requirements increase, the backlog tends to

grow, repair costs increase as a result of further depreciation, and when repair is no longer economical, replacement becomes necessary.

The Army has made an intensive effort to reduce its maintenance costs by improving procedures, by reducing where possible the amount of maintenance required, and by more efficient use of facilities. During fiscal year 1960, we have been able to arrest the growth of the backlog of deferred equipment maintenance. We anticipate that in fiscal year 1961 we will be able to preclude further increases in this backlog, but no appreciable reduction in the level of deferred equipment maintenance will be possible. There is also a considerable backlog of deferred facilities maintenance at active Army installations worldwide. This backlog of deferred facilities maintenance has increased during fiscal year 1960, and will continue to increase at about the same rate in fiscal year 1961.

Operation and maintenance activities have been carefully reviewed, and wherever possible economies have been effected. These economies include continuous and aggressive effort in closing and consolidating depot and supply activities, improvement of maintenance procedures, improvements in equipment reliability, more complete utilization of medical facilities, and elimination of property no longer needed by the Army. On the other hand, as more complex, modern items such as missiles and aircraft are added to our inventory, maintenance requirements also become more complex and costs increase. Such things as additional missile master sites, new missile units, and additional dependent housing, to say nothing of the effects of inflation—all will create increased costs for operation and maintenance during fiscal year 1961.

May I add a statement about operation and maintenance there? I would like to say that operation and maintenance has my heart interest. All these other programs and efforts—SAC and TAC and everything else, Navy, Air Force, Army, and the rest—they all have some champion to come to their rescue and speak up for them. O. & M. does not. It is a cripple. You can knock it down any time you want, but it is the basis on which we repair and put back in the line tanks and everything else. If we do not have the money, those tanks stay in standby or deadline until we do. Those are the things that bother me a great deal because our equipment backlog is much too large and our facilities maintenance backlog is growing.

These things really frighten me because, with the criticism of not keeping up to date, if we have the money in operation and maintenance to keep up to date, we want to put these vehicles and equipment back in the line and keep them going. We cannot do it if operation and maintenance becomes a target when something is to be taken out.

In other words, we feel that we would like to make a special appeal for all three services, not to be selfish about the Army, because we know it is across the board for operation and maintenance, and we would like to have you watch the items, if you will, very carefully this year.

LOGISTICS

We are striving toward a supply system which will maintain our combat forces at peak efficiency and, at the same time, permit us to reduce the number of items in the system, particularly those which are stocked in forward areas.

Probably the best example of our accomplishments along those lines exists in the supply system which stretches from the Bay of Biscay to Germany in support of our 7th Army. As you know, the development of this line of communications across France, begun in 1950, served the major purpose of reducing the vulnerability of U.S. stocks then stored in Germany and the dependence of our combat forces on exposed supply line from Bremerhaven. In order that this system will be immediately responsive to any emergency situation, it is currently used to fill the day-to-day needs of our troops in Germany.

In order to operate such a system in the most efficient fashion and to avoid concentration of supplies or stockage levels which would represent serious risks of loss under conditions of modern warfare, improved supply procedures were required. As a result of two years' experience with an experiment known as Project MASS (modern army supply system), such procedures have been worked out.

The net result has been to speed supplies to the consumer, to reduce costs, and to reduce item stockages at all echelons of supply in overseas theaters, from front line to depot. These latter reductions stem primarily from faster and more efficient methods of requisition and delivery.

There is a continuing requirement to provide new and improved structures of various types at installations within the United States and in base rights areas overseas. The Army has inactivated 40 installations and major activities since the beginning of fiscal year 1958—and additional installations will be inactivated when no longer needed. Nevertheless, the development, deployment, and support of new weapons systems in particular generate requirements for new facilities—many at existing installations, and some at entirely new locations, especially in overseas areas. Current funding levels will provide for only the highest priority items among these construction requirements.

MODERNIZATION

I cannot emphasize too strongly the importance to the Nation—indeed to the whole Free World—of providing the most modern arms and equipment to troops of the U.S. Army. This is not simply a matter of ensuring that the American soldier is well equipped when and if he is called upon to stand up against the vastly superior numbers and often superbly equipped forces of the Communist world; this modernization problem also has serious overtones in the broader sphere of international relations. Deep concern with the much discussed "missile gap" and the "space race"—important as they are—sometimes tends to obscure the fact that there is also a deadly serious contest afoot in many other elements of national power and in other facets of military capability.

Perhaps we can best appreciate the impact of this contest by considering for a moment the situation with respect to the Soviet Union in its position as leader of the Communist block. Not only have the Soviets, to all intents and purposes completely reequipped their own Army with modern items since World War II, they also have provided large quantities of military equipment to Red China and the satellites; and they continually make attractive offers of modern equipment to the so-called uncommitted nations.

Our evidence indicates that, despite Soviet claims, there has been no significant reduction in Soviet ground forces or other types of military forces. Soviet line divisions are supported by a wide variety of mobile ballistic missiles as well as conventional weapons of the latest design. It is perhaps sufficient to note that with the exception of two mortars and one howitzer, they have developed and issued to troops postwar models of all of the infantry, artillery, and armor weapons used in these forces. In fact, for some weapons there have been two postwar generations.

We have also received reports of increasing numbers of postwar Soviet models in the hands of certain satellite troops, notably in East Germany and Poland.

Although I am not advocating that the United States attempt to match Soviet production gun for gun and tank for tank, free world modernization and production programs must be kept in a proper relationship to those of the Communist world to avoid many other consequences over and above the relative obsolescence of the equipment in the hands of our own active forces—serious as that in itself may be.

In many parts of the world caught in the grip of the worldwide struggle between the United States and the U.S.S.R., a more effective rifle or a better tank is often the most tangible and readily convincing indicator of national power.

With these facts in mind, the Army has been devoting a large share of its funds to the procurement of equipment and missiles programs. Since the Korean conflict, we have placed varying quantities of some 150 new or improved equipment items in the hands of our troops, and approximately 350 more are in various stages of development, testing or procurement. The degree to which these essential items can be provided to meet minimum troop requirements is dependent on the PEMA funds which are made available.

During the past year we have continued to make progress in the production of new equipment such as the M–60 tank; the M–14 rifle and M–60 machine gun, both using 7.62 millimeter ammunition; and the M–113 armored personnel carrier. These programs are planned for continued emphasis in Fiscal Year 1961.

We are making continued progress in development of many other urgently required items. For example, a new family of self-propelled field artillery is in the final stages of development and will be available for procurement in fiscal year 1961. Significant progress has also been made in the development of DAVY CROCKETT. This lightweight, highly mobile, man-portable weapon system will greatly increase combat capabilities by providing nuclear firepower in the hands of small tactical units.

The increasing importance of land combat forces which I discussed earlier makes it imperative that Army weapons systems and other equipment to provide both nuclear and nonnuclear capabilities be constantly improved and placed in the hands of troops. In no other way can we maintain a current capability to execute emergency missions or a creditable day-to-day contribution to the essential military position of strength. As a consequence, the Army has under development or in production even more advanced weapons systems which carry improvements as far as the state of the art will allow. These include, in addition to major missiles and rockets which I shall discuss in some detail shortly, the following:

A main battle tank to replace the M–60 which will incorporate a significant reduction in weight and extension in operating range.

A new small arms concept, which will gain greater effect through the use of multiple projectiles.

A rolling fluid transporter which represents a new concept in the movement of petroleum, oil, and lubricants through use of large tires as containers, towed in pairs as a trailer.

I could name many more items in all fields of Army weapons and equipment.

In our surface-to-surface missile program, we will push PERSHING as a matter of priority, to provide a modern, solid fueled successor to REDSTONE. It will be helicopter transportable by our new CHINOOK helicopter and will provide a high degree of missile mobility within the field Army area.

We plan to increase also our shorter range missile capability by making the advanced solid propellant SERGEANT missile available at the earliest possible date to replace the CORPORAL. We will continue procurement of improved HONEST JOHN, LITTLE JOHN and LACROSSE missiles. Progress will also continue in the development of second generation missiles for the division and battle group.

In the surface-to-air missile program, both the fiscal years 1960 and 1961 programs continue to build up the capability of our NIKE missile system. We are concentrating on systems improvement for better target acquisition, and on providing electronic counter-countermeasure capabilities.

Procurement of HAWK will continue in fiscal year 1961, and will provide a mobile system capable of destroying both aircraft and aerodynamically supported missiles at low altitudes.

For forward area, low level defense against enemy tactical aircraft, or target acquisition aircraft, we are developing the REDEYE, a lightweight guided missile, carried by one man, with a shoulder-fired launcher reminiscent of the old bazooka.

As you are aware, the Army has been carrying out the development of NIKE-ZEUS to provide the United States with the earliest possible active defense against ballistic missile attack. The Army has recommended that a decision be made and funds be provided to place the NIKE-ZEUS system in production as soon as practicable.

Our disparity in numbers of men in uniform vis-a-vis the potential enemy requires that our forces must be more mobile than his to help overcome the imbalance. We are looking especially to our growing Army aviation program to help provide us with a mobility differential. To this end, we are improving our capability for moving men and supplies by Army aircraft in the combat zone. With improved aircraft now entering operational use and others still in the developmental stage, we hope soon to be able to move faster and more purposefully on the battlefield and thus to offset in part the Soviet advantage in numbers.

The ever-quickening rate of technological progress in the communications-electronics field demands constant and careful analysis by the military services. First, we must adapt for our use those civilian developments which have military application; then within the services we must assure adequate research and development effort on purely military requirements.

Communications is the cohesive factor in ground combat, providing the means for timely application of the other fundamentals—mobility and firepower. Continued major effort is also being applied in the area of target acquisition capabilities for our modern Army, to match our increased firepower delivery capability. We are budgeting for ground and drone surveillance systems, which will allow us to look deep behind the enemy lines under all conditions of weather and light. I mean by that night or day.

RESEARCH AND DEVELOPMENT

In order that the Army can exercise the high order of operational capabilities demanded by its responsibility to perform its fundamental role against quantitative superiority, it is vital that the Army possess a qualitative superiority over any potential enemy. To attain this qualitative superiority, the Army conducts a continuing, vital and dynamic research and development program, which is oriented toward achieving the greatest possible increases in combat capability through the exploitation wherever possible of breakthroughs in science and technology. Research and development is thus the forerunner of modernization in its broadest sense. We seek constantly for major improvements in existing materiel, while devoting the preponderance of our effort to the pursuit of new concepts in weaponry, mobility, communications, area surveillance, and the utilization of our human resources.

A good example of such a new concept is the development work we are doing with zero-ground-pressure combat vehicles. These are practical versions of the flying saucer which one day will fly in the so-called nap of the earth, just above ground. The availability to our Army of a combat vehicle which could traverse any kind of terrain or body of water encountered on the battlefield would represent a quantum jump in combat mobility somewhat comparable to the quantum jump in firepower represented by the availability of tactical atomic weapons.

Our fiscal year 1961 research program will be able to continue projects of particular importance in making those technological advances necessary for development of improved new weapons and equipment. We are emphasizing a broad basic research program which enables us to translate scientific advances as quickly as possible into new equipment. A great deal of applied research is devoted to exploration of the potential of new materials so that our combat equipment may be made lighter and more serviceable.

We must all realize, however, that research and development alone, without test and production models for further evaluation, improvement and issue to troops, makes no direct contribution to our military posture.

The leadtimes involved are often so great that development decisions made today and development resources available today will affect our capabilities relative to a potential enemy several years in the future.

ANALYSIS OF ARMY BUDGET FOR FISCAL YEAR 1961

In support of all these requirements to maintain the Army in a high state of combat readiness, the fiscal year 1961 budget totals

approximately $10.088 billion in direct obligations. This amount compares with the $9.966 billion received in fiscal year 1960 and the $9.555 billion in fiscal year 1959. To finance the fiscal year 1961 program, and prior years obligations, estimated expenditures will be $9.383 billion as compared with $9.349 billion in fiscal year 1960, and $9.468 billion in fiscal year 1959.

The budget provides for an Active Army of 870,000, a Reserve component paid drill strength of 630,000, and necessary support for these forces.

It is a balanced budget, designed to support an Army, as effective, modern and mobile as the resources will allow.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

We are continuing to devote a significant portion of our resources to the essential research and development effort. The fiscal year 1961 Army budget contains approximately $1.042 billion in direct obligations for research, development, test and evaluation. This represents a $59 million decrease from the direct obligations planned in fiscal year 1960. Approximately half of the appropriation, or $495 million, continues to be devoted to missiles and related equipment, including $287 million for NIKE-ZEUS. Communications-electronics, combat surveillance and target acquisition, and other combat support equipment will receive $155 million; $89 million is planned for ordnance weapons exclusive of missiles, and for vehicles and ammunition. The military sciences program, excluding non-Army agencies, will receive support in the amount of $119 million. It includes approximately $66 million for certain programs under the direct control of the Secretary of Defense. The balance of the funds is utilized in smaller programs.

PROCUREMENT OF EQUIPMENT AND MISSILES

For the procurement of equipment and missiles, the Army budget contains $1.524 billion in direct obligations. This is an increase of $136.4 million over the $1.387 billion for fiscal year 1960 and an increase of $427 million over the $1.097 billion for fiscal year 1959. The obligations planned for fiscal year 1961 will be used to provide new and modern materiel for the Army.

Last year I pointed out the Army's urgent need for rapid modernization of its major items of equipment. I spoke of a phased modernization program requiring an average annual investment of $2.8 billion. The funds requested in our 1961 budget, although short of this modernization program, will enable the Army to replace with modern equipment most of the items which we will lose during the fiscal year from wearout, obsolescence, and consumption in training.

OPERATION AND MAINTENANCE

In fiscal year 1961 the following activities within the tactical forces will place additional requirements upon the austere funding level in this appropriation: modification of the pentomic organization to secure better battlefield capability; increased Army aviation operation; additional missile units; an expanded requirement for missile master; and increased participation in the air defense systen .

The fiscal year 1961 budget for operation and maintenance provides $3.112 billion in direct obligations, which is slightly more than the $3.070 billion in fiscal year 1960 and the $3.087 billion in fiscal year 1959. However, with costlier equipment, loss of inventory drawdown as a resource, and rising prices, this modest increase in the level of funding in this appropriation will not represent any real expansion in the O. & M. program. The most stringent utilization and management of available funds will continue to be necessary to maintain today's Army.

Even though funding levels for operations and maintenance in fiscal year 1961 are slightly higher than for fiscal year 1960, these programs must continue at austere levels. I firmly believe that the programs planned for 1961 represent the minimum allocation of resources to avoid serious impairment of our combat readiness position.

MILITARY PERSONNEL

During fiscal year 1961, active military personnel strength will be maintained at 870,000. To support this strength, $3.521 billion will be required in the appropriation, "Military personnel, Army." Of this amount, $260 million will be derived by transfer from unobligated cash balances in the Army stock fund. The resultant requirement for new obligational authority is $3.261 billion. The increase of $50 million in direct obligations over requirements in fiscal year 1960 results primarily from implementation of the third step in the proficiency pay and in the E–8 and E–9 programs, 1 percent higher NCO and specialist ratio, greater number of reenlistments, and from increased Government contributions for social security.

Fund requirements for the support of our Reserve components are contained in several appropriations and provide for an authorized paid drill strength of 630,000; 360,000 in the Army National Guard and 270,000 in the Army Reserve. The fiscal year 1961 planned input into the 6-month active duty for training program is 28,000 National Guard trainees, 20,000 Army Reserve trainees, and 4,610 ROTC graduates. The appropriation estimates in support of Reserve components, including construction and operation and maintenance, total about $670 million in direct obligations.

MILITARY CONSTRUCTION

An effective Army must have not only the essential men and materiel, but also adequate bases from which it can function. Our construction program has as its objective to provide, on a timely basis, the facilities necessary to support strategic and tactical troop deployments; to train the officers and men of the active Army and the Reserve components; to develop, test, and maintain and efficiently operate the equipment and material we require; and to attract and retain the high caliber personnel so necessary in today's modern Army. The fiscal year 1961 budget contains $212 million in direct obligations for the military construction, Army, appropriation. This represents a sizable reduction from the $272 million in direct obligations budgeted in fiscal year 1960 and the $240 million in fiscal year 1959.

This year's budget will provide for continued support of the Army's surface-to-air missile program. This includes certain support for re-

search and development activities for NIKE–ZEUS, facilities required for oversea deployments of additional HAWK battalions, and other necessary system improvements. "Military Construction, Army" funds will be used to provide operational logistic support and administrative facilities for units deployed in oversea base rights areas and for installations within the United States, the Caribbean, and Okinawa. Approximately $25 million of direct obligations in this appropriation will be utilized for requirements such as planning, minor new construction, utilities for Capehart housing, and access roads.

The Army Reserve construction program for fiscal year 1961 will provide $12 million in direct obligations for the construction of 51 Army Reserve center projects. The $20 million in direct obligations for the Army National Guard is for construction of 129 armory and nonarmory projects. As I am sure you are aware, the beneficiary States augment the funds provided by the Federal Government for National Guard construction by providing, within specified standards, 25 percent of the cost of the armories, the armory sites, and certain utilities.

In summary, the Army will continue to provide the Nation with the maximum defense capabilities possible from the resources made available. The Army will remain a versatile, combat-ready fighting force and an essential element of the national defense. It will continue to provide one of the primary bulwarks of our foreign policy in cold war, to contribute to the deterrence of either general war or limited war, and to stand ready to execute its important role in any form of conflict.

Before closing, I should like to express my personal appreciation and that of the Army for the assistance which Congress has provided in efforts to make the military services more effective. I refer to such actions as the passage of pay and incentive legislation, qualitative selection of personnel, family housing, and medicare, which have been responsible in no small measure for some of the important progress I have described.

I want to assure you once again that the Army will continue to maintain its excellent traditions and standards of performance in support of the national policy. Its morale is the highest it has been in the more than 4½ years I have been its Secretary. With the increasingly important role I see for the Army in the future, I have every confidence it will continue high, with a consequent greater effectiveness.

The Chief of Staff of the U.S. Army, General Lemnitzer, will develop in more specific terms the military posture of the Army as it is programed for fiscal year 1961. Later, General Traub, director of Army budget, will present a summary of the budget and the means proposed for financing our programs.

Mr. MAHON. Thank you very much, Mr. Secretary. Will you proceed, General Lemnitzer?

GENERAL STATEMENT OF THE CHIEF OF STAFF OF THE ARMY

General LEMNITZER. Mr. Chairman and members of the committee, Secretary Brucker has outlined the expanding and changing nature of the Communist threat to the United States and its allies.

I am, of course, aware of Mr. Krushchev's recent announcement of a planned reduction of 1,200,000 in the strength of the Soviet armed forces. In connection with Mr. Khrushchev's speech, I have during the past week been disturbed by the interpretation being given to it by our news media. This interpretation is to the effect that his proposal calls only for a reduction in the Red army. In order that you may be familiar with the comprehensive nature of the statement, I would like to read a very significant paragraph of it. I am quoting Mr. Khrushchev:

> Our state has at its disposal powerful rocket equipment. The military air force and navy have lost their previous importance in view of the modern development of military equipment. This type of armament is not being reduced but replaced. Almost the entire military air force is being replaced by rocket equipment. We have by now sharply cut, and it seems will continue sharply to cut and even discontinue, the manufacture of bombers and other obsolete equipment. In the navy, the submarine fleet assumes great importance, while surface ships can no longer play the part they once did. In our country, the armed forces have been to a considerable extent transferred to rocket and nuclear arms. These arms are being perfected and will continue to be perfected until they are banned.

This announcement could be very important or virtually meaningless, depending upon when and how such a reduction might be implemented. This we do not know at the present time. However, some idea of the Soviet concept of war may be gained from the fact that Mr. Khrushchev also pointed out:

First, that even such formidable weapons as ballistic missiles could not achieve victory and that large armies have an essential role in war; and

Second, that there is continued need for strong reserves.

These thoughts were reinforced by the Soviet Minister of Defense, following Mr. Khrushchev's statement, declared that the Soviet Union was not adopting a single-weapon concept but was retaining in sound proportion all types of armed forces. A reduction such as that indicated by Mr. Khrushchev, if it were ever carried out, would still leave the Communist bloc forces in a very favorable position in comparison with those of the West.

In order to meet the military aspects of the Communist threat in its entirety, our strategy must provide an adequate response to the threat both of Soviet nuclear attack on the United States and of all Communist aggressive actions short of such an attack.

To implement this strategy, our military forces, together with those of our allies, must be capable of coping successfully with a wide variety of situations ranging across the entire spectrum of warfare, from all-out nuclear war to small local aggressions and the cold war. The Army plays a vital and essential role in providing the capability to meet all elements of this powerful and versatile threat.

Secretary Brucker has described the broad role of the Army in contributing to our overall defense capability. I would like to mention the principal tasks of the Army in fulfilling this role. They are:

First, to maintain forces overseas for the deterrence of aggressions, or for effective resistance to aggression if deterrence fails. An important corollary is the provision of military assistance advisory groups and military missions to our allies to increase the effectiveness of their contributions to this task.

Second, to maintain mobile, combat-ready strategic forces in the United States for the rapid reinforcement of forward deployed forces and of allies in areas where no U.S. forces are now deployed.

Third, to provide forces for the defense of the United States against air attack.

Fourth, to maintain a base for rapid mobilization, including strong, ready civilian component forces.

For the accomplishment of these tasks, our program for fiscal year 1961 provides for a strength of 870,000 in the Active Army and a paid drill strength of 630,000 in the Army Reserve components—the Army National Guard and the Army Reserve.

The force structure for the Active Army will be based on the maintenance of 14 combat divisions. Of these, eight will be deployed overseas and six will be located in the continental United States. The reserve component force structure will be built around 37 combat divisions. Of these, 27 will be in the Army National Guard and 10 in the Army Reserve.

Approximately 40 percent of the Army strength will be deployed in oversea areas. If aggression occurs, these oversea forces, together with those of our allies, must hold until they can be reinforced.

In Europe, Army forces will remain essentially at their present level. By the end of fiscal year 1961, we will have a force built around five divisions and other combat units. This includes the forces in Berlin and the Southern European Task Force stationed in northern Italy.

In the Pacific, Army forces will be maintained at a slightly increased level. By the end of fiscal year 1961, our forces in the Pacific area will be built around three divisions—two in Korea and one in Hawaii—and other combat units. In addition, the National Guard is scheduled to man 1½ NIKE-HERCULES battalions in Hawaii.

In Alaska, Army forces will remain essentially unchanged.

We will also maintain the NIKE-HERCULES surface-to-air missile battalion at Thule, Greenland. Army forces in Iceland will be withdrawn this spring.

Overall, within available resources, the organization, training, and equipment of Army forces overseas will be excellent.

The Strategic Army Corps will continue as a three-division force, together with combat- and service-support units. This force will be maintained in a high state of readiness and available for immediate deployment in any emergency wherever it may occur. However, for prolonged operations it will require reinforcements and additional logistic support.

The remaining three divisions and combat- and service-support units in the continental United States constitute the Strategic Army Corps reinforcement. These units are not maintained in as high a state of readiness as the Strategic Army Corps because of limitations on personnel and because they are heavily engaged in the conduct of basic training.

The Army's contribution to defense of the continental United States against air attack is the provision of NIKE-HERCULES and NIKE-AJAX surface-to-air missile units.

The maintenance of a base for rapid mobilization depends to a large degree upon the Army's Reserve components.

The provision of immediate backup for the Active Army involves the major portion of the Army's Reserve Forces. For this purpose, the Reserve components maintain a high priority force of combat and combat-support units to complement the active divisions, so that division forces capable of sustained combat can be deployed to meet the requirements of joint war plans.

The provision of a training base for mobilization is carried out primarily by the Army Reserve, which maintains 13 training divisions and other units for this purpose.

Army Reserve components are now at the highest degree of readiness in our peacetime history and are in a better position than ever before to supplement the Active Army.

Besides its four principal tasks, the Army in fiscal year 1961 will be engaged in a number of other functions contributing to our national security. These include:

Military advisory groups and missions to over 40 nations throughout the world.

Administrative and logistical support to the other armed services and other U.S. governmental agencies.

Support for atomic delivery systems which we are supplying to other Nato nations through the military assistance (mutual security) program.

The attaché system, and

A number of other activities in support of our national security efforts.

In fiscal year 1961, the Army will devote approximately 49,000 military personnel to these important functions.

The major elements of the force structure which I have discussed must be responsive to the requirements of prompt and sustained land combat. This requires a balance between operational forces and the support necessary to sustain them. Our operational forces require a constant flow of trained personnel, modern weapons and equipment, and large tonnages of supplies. They also require a wide range of support such as production, storage, distribution, and maintenance of supplies and equipment; transportation; communications; and medical services. In addition, they must have suitable installations to support training and operations. Thus, the Army requires an extensive and flexible support system to carry out its assigned missions.

I want to touch in particular on two aspects of support—operations and maintenance, and modernization of the Army.

Secretary Brucker has discussed operations and maintenance in some detail. I firmly support the statements he has made in this regard. I would, however, like to emphasize that one of the most important facets of operations and maintenance is the support of the Army's time-tested training program so essential to the combat effectiveness of the Army.

This program includes the Army school system, which develops leaders and specialists prepared to take full advantage of new concepts and modern, complex equipment. It also includes the Army training centers which provide trained replacements for all units of the Army. It provides for normal unit training and the major field exercises to train units in cohesive combat operations, and to test doctrines, tactical concepts, and weapons systems.

In addition, it provides for the active duty training of the Army's reserve components, as well as of personnel from the other armed services. During fiscal year 1961, the training program will provide for approximately 300,000 residents and nonresident students in the Army school system, plus approximately 240,000 trainees. This is about the same training program carried out in the current year and represents what I consider to be the minimum level of effort in the light of the Army's extensive overall training requirements.

I would now like to discuss briefly the modernization of the Army.

In any meaningful military planning we must take into account the long leadtime from concept to actual accomplishment. While the leadtime factor applies to planning, budgeting, organization, training, and other pertinent areas, it is particularly important in the fields of research and development and the production and procurement of modern military material. Thus, we must be keenly aware that basic decisions taken now in these areas will establish the parameters of our capabilities 5 or more years hence to meet the then existent threat.

Secretary Brucker has mentioned the need for modernization in the context of Soviet progress in this field. I wish to mention the need for modernization imposed by the nature of modern warfare.

The use of nuclear weapons, or the threat of their use, has vastly changed the battlefield and tactical concepts of land as well as other forms of warfare. Because of the greater destructive power of these weapons, the modern battlefield will be characterized by greatly extended combat areas and dispersed situations. A force designed to fight and survive on such a battlefield must possess greatly enhanced capabilities in firepower, combat intelligence including battlefield surveillance, mobility, and communications. Because of the possibility of engaging in either nuclear or nonnuclear warfare, modern military forces must be dual-capable—they must be prepared to fight under the conditions of either type of warfare.

To provide for increased range and effectiveness of firepower, the Army has developed a most effective and versatile family of weapons. These include:

New surface-to-surface missiles, such as the DAVY CROCKETT, the LITTLE JOHN, the improved HONEST JOHN, the LACROSSE, and the SERGEANT.

Conventional weapons, such as the M–60 tank, a new family of self-propelled artillery, and a new family of 7.62 mm. (caliber .30) small arms.

The wide frontages and dispersed formations, characteristic of the modern battlefield, as well as increased firepower capabilities, establish a requirement for greatly improved battlefield surveillance and target acquisition equipment. The Army has developed both surveillance drones and manned observation aircraft—such as the MOHAWK—carrying photographic, infrared, and radar devices.

To improve mobility, the Army has developed new ground vehicles and aircraft. Among these are the new lightweight armored personnel carrier featuring aluminum armor, and new aircraft such as the CARIBOU, the IROQUOIS, and the CHINOOK.

In the field of communications and electronics, a wide variety of new equipment ranging from transistorized telephone equipment to electronic jamming devices has been developed.

Our program for fiscal year 1961 includes provision for varying quantities of the equipment which I have just mentioned.

I would now like to mention research and development, which is an essential facet of modernization.

One important aspect of the R. & D. program is the effort in basic research—the Army's investment in the long-range technological future. Continued investigation in this field is essential if we are to improve our position in the technological race.

The research and development program for surface-to-surface missiles in fiscal year 1961 will place emphasis on second-generation missiles, all of which will employ solid propellants. As a matter of urgency, we are vigorously pushing work on the PERSHING missile, which provides a solid propellant replacement for the REDSTONE as the field army general support missile.

Development in the field of air mobility is continuing with the objective of developing a more versatile family of aircraft. We are continuing to explore radical aerodynamic approaches to achieve a true vertical takeoff and landing capability.

In the equally essential fields of conventional firepower, surface mobility, and communications, work will be pushed on a wide variety of equipment designed to improve our combat effectiveness. Of particular interest in the field of general mobility is the GOER, an adaptation of a heavy commercial vehicle which may greatly improve logistic support operations.

The entire modernization effort—particularly in the field of research and development—is designed to meet possible future Army missions and requirements. Such missions and requirements are in turn dependent upon continuing changes in the nature of the threat, and in technology and the consequent changes in warfare. The Communist threat, national strategy and policy, and military capabilities are dynamic, hence constantly susceptible to change. This changing threat, together with the new weapons system, new techniques of operation and evolving patterns of organization, require constant study and evaluation in order to take full advantage of any trend which will enhance our national security. In this regard, we have not yet reached the point where the long-range missile with its multimegaton warhead has exerted its full impact on the conduct of war.

However, it appears quite possible that within the next few years both the Communist and free worlds may have acquired a virtually indestructible capability in this field. When this situation obtains, it could bring about what has sometimes been characterized as the equivalent of strategic nuclear disarmament. We must always have, as a vital part of our military power, the invulnerable strategic nuclear missile deterrent. Under such circumstances, the more likely forms of conflict may well involve primarily the use of land, sea, and air forces in their modernized yet basically traditional forms. In such a situation, the Army would continue to play its vital and traditional role.

In conclusion, I assure you that the Army will stress readiness for combat in order to meet its worldwide responsibilities. I believe that the plans and programs within the fiscal year 1961 budget represent the optimum utilization of the resources to be made available to the Army.

Mr. MAHON. Mr. Secretary, you have not presented a rosy picture of the status of our Army in your appearance here today. We have been trying to do something about modernization of the Army. Yet, as Secretary of the Army, you repeatedly refer to aging equipment and growing maintenance problems. If this trend, which you deplore, continues, where are we headed?

Secretary BRUCKER. For a greater backlog of deferred maintenance of facilities and a continued large backlog of deferred equipment maintenance that we might utilize if we had the money to repair and keep it modern. Also for a lack of the initial new equipment which we feel would be a very desirable thing for our Nation to have.

Mr. MAHON. But if we are going to continue as we are, what is going to happen to the Army?

Secretary BRUCKER. There is no doubt about the fact that the Army has less and less each year. We have pointed it out each year, what the facts are specifically with respect to dollars, particularly in the procurement and operation and maintenance accounts. Those are the two that relate to materiel, weapon systems, guns, tanks, things in the hands of troops, hardware so to speak—that is my concern. I am trying to say in this statement in words of one syllable I am concerned about modernization and what we have in the hands of troops. I am trying to get things in the hands of troops that are modern and keep them modern and keep them repaired and ready and available on the line.

Mr. MAHON. When Admiral Burke, Chief of Naval Operations, was before us he referred to the difficulty of handling the problems of a continuously shrinking Navy—those are not the exact words, but it is substantially what he said. You seem to be concerned about the future of an Army which you say is not modern, yet is confronted with modern Army equipment in the possession of our opponent; is that correct?

Secretary BRUCKER. I think I can put it very concretely and directly. We have facing us the Soviet Army whose ground troops are quite modernly equipped. It is what you have in the hands of troops, Mr. Chairman, that is quite critical in this matter. That is what we want to do. We feel we do not have in our hands the same number or amount or ratio of equipment—modern equipment I mean by that. We have equipment, of course. We are willing to take the guns we have and do the best job in the world we can do.

I think the quality of our people will demonstrate that we are ready to do it. We want the more modern equipment, which is why I am putting the emphasis on the modernness we require in the Army. I realize a lot of people talk about the end strength and I am not backing down on the fact that I would like to see, of course, enough troops in numbers to cover the commitments. But as I see the priorities here, I think that the effort and the priority I place upon it today is the modernness of the Army.

Mr. MAHON. You talk about the Soviet Union having in some instances provided second generation equipment since World War II.

Secretary BRUCKER. That is right.

Mr. MAHON. Would you say that from the standpoint of equipment, equipment only, our Army is second to the Soviets?

Secretary BRUCKER. Let me express it this way. We have equipment which is less modern and a great deal of it cannot meet the modernness of the Russian equipment. Some of our equipment that we have in research and development is very modern, and what I want to do is translate that from research and development into the hands of troops and make it modern.

Up at Aberdeen 5 months ago we had there about 4,000 Ordnance and other people interested. In front of the reviewing stand we had 49 items, all of which had been developed since World War II and modernized, ready to go. Those are the things we would like to put into production, into the hands of troops. We have the materiel that would meet these Russians and would beat them from that standpoint as far as ordnance and hardware is concerned, but we do not have it in the hands of troops.

Mr. MAHON. Please be fully informative as to the facts.

Secretary BRUCKER. It is rather difficult to make a comparison. However, generally I would say the Russian equipment is more modern than ours.

ARMY STRENGTH

Mr. MAHON. The Army wants more men or would like to have more men to carry out assigned missions, yet it cannot maintain its equipment in modern status for the number now planned. Would it be better to have a smaller, well-equipped force?

Secretary BRUCKER. No, sir. I will answer that categorically—no. The force of 870,000, in my opinion, is a minimum and marginal force and any less would not enable us to carry out the commitments we have. To further reduce the force would be a very dangerous thing, in my opinion.

Mr. MAHON. I will interject this further question, which is approximately the same. Should the Army say this to the President: If this is all the money we can have, we will cut our strength to 700,000 or 600,000—whatever the figure should be—in order that the forces remaining will be well equipped and ready to fight at the drop of a hat.

Secretary BRUCKER. I do not agree with that statement, Mr. Chairman. I definitely do not. The United States has the resources and we have the ability. This is a minimum force. If we withdraw one or two divisions from NATO or any other place in the world at the present time, you can just imagine what that would be not only from the standpoint of the psychological international situation but from our own standpoint, the inability to do the job. I just say directly and categorically, in answer to that, that would be the wrong approach to take—even to cut the force by one; 870,000 is the very minimum, in my opinion, and I do not believe the strength should be reduced again. The Army has come down already from over 1,200,000 to 1 million, again to 900,000, then to 870,000. Each time we have had an increasing role, something added month by month, which increases our responsibilities. We cannot accomplish our current roles and missions, with any fewer troops than we have at the present time.

COMBAT VERSUS SUPPORT TROOPS

Mr. MAHON. Of the total 870,000 men programed to be in the Army, what proportion are combat troops and what proportion are support troops? Someone can give us that.

Secretary BRUCKER. General Lemnitzer has that percentage at hand here.

General LEMNITZER. We have broken down our forces into several categories. The category of operating forces includes the combat forces, and that figure is 65.8 percent of our total in operating forces; 9.2 percent are in supporting forces and the rest are in training, special activities, or transients and patients.

I should point out this is the highest proportion that the Army has ever been able to move into the operating force category. So far as I know, no other army has a greater proportion in the category of operating forces.

Mr. ANDREWS. Mr. Chairman, may I ask one question there?

Mr. MAHON. I think it would be well to make it very clear just who these people are in the 9 percent of support forces. How do you define it?

General LEMNITZER. In the support forces, they are the people who keep our lines of communication functioning to insure that the combat forces get their ammunition, fuel, and who provide replacements for casualties. In other words, they keep the combat forces functioning in sustained combat.

I will spell it out in more precise detail. It includes all support services such as supply, distribution, maintenance, medical and hospital services, intelligence, and major headquarters. That is where they are.

Mr. MAHON. Mr. Andrews.

Mr. ANDREWS. I just wanted to ask the general this. As I recall, in the Marines the percentage of combat forces is in the range of 80 or 90 percent. Why cannot the Army do that if the Marines can?

General LEMNITZER. The Army provides that kind of support I am talking about to the Marines. The missions are different. The Marines go into a particular operation related to their support of naval operations, and they are in for a relatively short time. If they go in, as they did in Korea, where they fought as a part of the 8th Army—as a matter of fact, I had the 1st Marine Division adjacent to my own division up in the high mountains of Korea—then they rely on this Army support system to provide the ammunition, the transportation, the fuel, the food, and all the other support.

Mr. ANDREWS. In other words, when you work with them, you do a lot of their housekeeping?

General LEMNITZER. We do, and we do a considerable amount. As I indicated in my statement, the Army is providing a considerable amount of support for the Air Force, Navy, and Marines throughout the world.

Mr. ANDREWS. Do you think your percentage of combat personnel can go up from the 65 percent and, if so, how high do you think it can go?

General LEMNITZER. This percentage has been worked on by all my predecessors since World War II and it has been gradually raised to

the present level. In my opinion, with the nature of warfare as it is and as we see it in the immediate future, we are not going to make any drastic changes in these proportions and still have a balanced force that can go in and do a sustained combat job, which is the mission which we are called upon to perform.

Mr. ANDREWS. Thank you.

Mr. MAHON. Do you make a distinction between operational forces and combat forces?

General LEMNITZER. Only in this sense. We have used all kinds of terms to separate the various categories of forces. We refer to the combat and combat support. By combat support I mean that type of combat force that is in our corps artillery—our missile battalions—and in the field Army where they have certain types of fire support units, combat engineers and troops of that character.

Mr. MAHON. Are supply and logistics in this area?

General LEMNITZER. No, they are not. Here we must be very careful. Within a division, for example, which we regard generally as combat forces, there are supply, logistics, medical and other personnel essential to the operation of that division, but we regard all the personnel within a division as being in the operating forces which I have just mentioned here. However, some of them may be providing logistic support, medical support, or engineer support within the division.

This is where we encounter difficulty in defining our forces as being strictly combat forces. The general feeling is that only the man with the rifle is a combat soldier. The men working with artillery, or those in our missile units that may be rather far back, we still regard as combat troops.

Mr. FLOOD. Mr. Chairman, I would like the clerk of the committee or you to request of the Air Force an analogous statement of figures. I have seen this year after year for the Army and for the Navy. In the past years I have never seen the Air Force suggest any kind of a figure on this point. I would like to see it.

Mr. MAHON. We might ask for a consolidated statement with respect to all the services.

Mr. FLOOD. Particularly the Air Force on this point. I am curious.

(The information to be supplied follows:)

[In percent]

	1960	1961		1960	1961
Army:			Marine Corps:		
Operating forces	65.0	65.8	Operating forces	60.8	64.8
Supporting forces	9.5	9.3	Supporting forces	10.7	10.6
Special activities	6.8	6.8	Special activities	.1	.1
Training	16.4	15.7	Training	20.9	17.5
Transient and patients	2.3	2.4	Transient and patients	7.5	7.0
Navy:			Air Force:		
Operating forces	61.8	62.0	Operating forces	66.1	66.5
Supporting forces	15.6	15.5	Supporting forces	16.0	16.0
Special activities	.3	.3	Special activities	.6	.5
Training	16.0	16.0	Training	17.1	16.8
Transient and patients	6.3	6.2	Transient and patients	.2	.2

AIRLIFT OF STRATEGIC ARMY CORPS

Mr. MAHON. What actually, General Lemnitzer, is the degree of readiness of STRAC today? How many hours or days would it take

to place one division in position at a trouble spot? That is, in the Middle East or Central America or in the Far East or in Africa. What numbers and types of aircraft would be at the call of STRAC for air transportation in response to an urgent need for troops in any of the areas previously mentioned? I want you to discuss this generally.

General LEMNITZER. It will take a considerable amount of discussion to cover that question, Mr. Chairman. First, I would like to say STRAC is in a high degree of readiness; it is ready to go. For instance, I will take Fort Campbell where our 101st Airborne Division is located. There is one battle group on constant alert at Fort Campbell, the leading elements of which can move from barracks to the adjacent Fort Campbell Air Force Base within an hour ready to load aboard aircraft. The other parts of the division are prepared to follow just as fast as aircraft are made available.

Mr. FLOOD. What aircraft?

General LEMNITZER. The aircraft that would be made available for this airlift.

Mr. FORD. Mr. Chairman, that was done not very long ago.

General LEMNITZER. It was done in a movement in connection with the Vice President's situation in Venezuela a little over a year ago. We had a considerable number of troops spotted or loaded, moved to Puerto Rico in a few hours, and ready for whatever further action was required.

Mr. FLOOD. How big an element was that?

General LEMNITZER. It was a small element.

Mr. FLOOD. How big?

General LEMNITZER. There was no reason why they could not have kept on coming.

Mr. FLOOD. If you had the aircraft. How many bodies were in the Puerto Rican jump?

General LEMNITZER. It was not a battle group. It was 570.

Mr. MAHON. You can tell us at 2 o'clock.

General LEMNITZER. Last year we also had one of our most successful operations, where we put an entire battle group of more than 1,500 troops down by parachute in Panama in an exercise known as Banyan Tree. These troops were flown right from our STRAC area, dropped in Panama in a matter of hours.

Mr. FLOOD. Do you have any idea how that drained the resources of the aircraft, transport aircraft, to take you in that jump?

General LEMNITZER. We do.

Mr. FLOOD. It was pretty bad, was it not?

General LEMNITZER. Insofar as those locally available around Fort Campbell and Fort Bragg, yes.

Mr. FLOOD. Do you want to go further than that?

General LEMNITZER. I am prepared to develop our problems in this regard during this hearing, as we have in the hearings in which we have been before.

PROGRAMED STRAC EXERCISE

We have a big exercise scheduled in March, Mr. Chairman, which will be of interest to the committee. I must point out, however, it is a specialized type of airlift operation. It is a movement of about

20,000 Army troops of our STRAC forces to Puerto Rico. This is a simulated movement of about 20,000 troops. They will carry principally only their individual equipment..

This exercise is one primarily with the Military Air Transport Service, and it must be differentiated from the troop carrier type operation in which we put down simultaneously an airborne assault with troops and their combat equipment, but it is an interesting exercise.

For instance, reinforcement of troops in Europe could very well involve a movement of this kind. On this exercise we are only going as far as Puerto Rico and back, but it is a considerable flight. It is an effort to train MATS and Army forces. MATS will have to pull aircraft off the various routine runs quickly and make them available for airlift.

Mr. MAHON. How many planes do you think will participate in that operation?

General LEMNITZER. I am not certain as to the number, but it runs into many hundreds of aircraft.

Mr. FLOOD. Carrier pigeons, too?

General LEMNITZER. I doubt it, sir.

Mr. MAHON. Let us get more information as to what your capabilities are for moving a division to some faraway place such as the Middle East.

General LEMNITZER. I hate to put it this way, but it will depend on the available aircraft. Here we depend upon the amount of aircraft and types that will be made available, that will actually be spotted at Fort Bragg and Fort Campbell or flown in promptly. I would assume it would be one of the two divisions located at those posts.

Mr. MAHON. This committee looks at the problem from the standpoint of the United States. We want to know what the United States can do here, and you have not told us.

General LEMNITZER. Not yet. I am assuming we will get all the aircraft we need for this particular movement. I would say the leading elements of such a movement into the Middle East could arrive in a matter of about 72 hours—the leading elements.

Mr. MAHON. They would arrive where, at port of departure?

General LEMNITZER. They would arrive in the Middle East—that is, the leading elements. Then the rate at which the rest of the division came in would depend upon the amount of aircraft made available to us. We figure anywhere from 10 to 14 days for the division to close in the area, but the majority of the combat elements would be in that area within between 3 days to, say, 5 to 7 days.

AVAILABILITY OF AIRCRAFT NOT ASSURED

Mr. MAHON. You say that for the purposes of this testimony you are assuming certain aircraft will be available?

General LEMNITZER. That is right, sir.

Mr. MAHON. Is that a sound and reasonable assumption, in your opinion?

General LEMNITZER. No, it is not a totally valid assumption, Mr. Chairman, for this reason. The availability of that aircraft will be dependent to some extent on how much the situation builds up where

such a movement is required. If we have some warning, that kind of aircraft can be taken from other areas of the world where it happens to be distributed at the present time. Our airlift is distributed all over the world today.

If the emergency does not generate other important requirements, we can get a large amount of aircraft, but our problem is that the same emergency that would generate the need to move a division into the Middle East would also generate requirements to move tactical air forces, to provide support. It could also require substantial movement of the Strategic Air Command.

Mr. FLOOD. May I interrupt? And would also under the present circumstances as they are developing in the years ahead, even during the life of this budget you are talking about, the same elements and the same circumstances which would generate the need for you to fly a division to the Middle East will most certainly create the need for you to fly another one from Hawaii to the Far East on the same morning.

General LEMNITZER. This is correct because it is a factor. I do not believe we are going to enjoy the luxury of having only one of these crises descend upon us at a time.

What I am getting around to is the allocation of our airlift, which, in my opinion, is one of our most important military assets. It will have to be allocated in the light of the situation then existing. If it is merely a movement of a division from, say, Fort Campbell or Fort Bragg into the Middle East with the necessary aircraft made available promptly, my estimate is about 3 days for the initial elements to arrive and 10 days before the division closes.

I am not sure, however, we will have that particular type of aircraft available. This presents the troublesome problem about airlift—its availability. While we are talking airlift, we have two concerns about airlift. First, numbers. In other words, we are stretched thin in our airlift. If we had greater numbers, we would have greater flexibility and greater capability.

We are also concerned about the modernness of our airlift. The types of airlift aircraft we are training with at the present time are old aircraft, and our concern is both on numbers available to the Army for meeting its mobility requirement to put down a division or two divisions in the Middle East, southeast Asia, wherever it may be; and also the modernness of that airlift.

TIME REQUIRED TO MOVE A DIVISION

Mr. FLOOD. You are also talking about, in the answer to Mr. Mahon's question, 14 days for a full division, 5,000 miles of absolutely nothing but advance fire echelons, with the very lightest hardware that will go in that kind of aircraft, and no heavy support and logistics outside of 30 days to 6 weeks and then by surface transport by the Navy.

General LEMNITZER. We always would expect that the sea lines of communication would be established as quickly as possible, and a movement of that kind would always inevitably be a combination of airlift and sealift. You are quite right; we cannot move our heavy tanks, and other similar heavy equipment, in aircraft.

Mr. FLOOD. Why not?

General LEMNITZER. We do not have the aircraft that will take our M–48 tanks.

Mr. FLOOD. You do not need M–48's. You cannot move anything outside of maybe an antitank gun on any kind of aircraft you do have. You are putting down advance echelons of a rifle division 5,000 miles away for 14 days with nothing but what you have with you.

General LEMNITZER. We would put it down with light tanks, armored personnel carriers, with artillery and antitank weapons; yes.

Mr. FLOOD. And arrive there over a span of 14 days on the aircraft you have today.

General LEMNITZER. That is true.

Mr. FLOOD. It would be a tough war.

General LEMNITZER. This is true.

Mr. ANDREWS. You are saying, General, in a situation like that you are concerned primarily with the man in the Army to be flown to the hot spot?

General LEMNITZER. Yes, but as a member of the Joint Chiefs of Staff, I have another responsibility and another important interest, as the chairman mentioned. If an emergency develops in any part of the world, I am interested in the United States putting the requisite number of forces in there to nip the particular situation in the bud—and quickly—and thereby prevent it from growing into something out of all proportions to its importance and perhaps get out of hand.

Mr. ANDREWS. But it is dependent on transportation on other branches of the service?

General LEMNITZER. Yes.

ADEQUACY OF AIRLIFT

Mr. FLOOD. General White said to me yesterday, in answer to a question on direct examination on this point, that the Joint Chiefs of Staff have decided and have agreed that there is an adequate airlift existing today for all foreseeable needs—and upon that he stands. Do you, as the Army member of the Joint Chiefs of Staff—have you participated in any such Joint Chiefs' discussion? If you have, what was your position on General White's statement? As far as he is concerned, he says the Joint Chiefs say that our airlift is adequate and he is satisfied about it.

Mr. MAHON. Without objection, we will place in the record at this point whatever General White did say.

(The information requested was not received in time for printing.)

Mr. FLOOD. What does General Lemnitzer say in reply to that statement? Is it the position of the Joint Chiefs? Did you participate in the decisions? Did you agree? If you did not agree, why not?

General LEMNITZER. The statement which you have quoted I do not agree with. The accuracy of this will have to be determined, but I would like to make it clear to the members of the committee present here that if the statement was as Mr. Flood has indicated—that the Joint Chiefs of Staff are agreed that we have adequate airlift—I do not agree with it for the reasons I indicated, both in numbers——

Mr. FLOOD. It is a good thing I asked that question, is it not?

General LEMNITZER. Both in numbers and in modernness of our present lift.

DISCUSSION OF AIRLIFT BY JOINT CHIEFS OF STAFF

Mr. MAHON. Have the Joint Chiefs discussed the adequacy of airlift?

General LEMNITZER. Yes.

Mr. MAHON. What have you agreed upon and what is the position of the three services?

General LEMNITZER. General White could well be referring to a study that was made with respect to general war. We are agreed on the requirements for general war, but even in general war, it was agreed by the Joint Chiefs of Staff that during the first 10 days of war—which, in my opinion, is one of the most critical periods of the war—we would have shortages of airlift. What I am getting around to is that where our disagreement is widest is in the field of limited war.

Mr. FLOOD. General, I want you to know that General White was talking about just this. I made it very clear to General White. I stated precisely the same premise I am stating to you. I was not talking about general war. I told him I wanted to move two divisions, what time and where.

Mr. MAHON. I would like for you to proceed to give us your present statement.

General LEMNITZER. Since we do have this problem and it has been a troublesome problem for a number of years, and I am sure every member of the committee has heard it for a number of years, General White and I and our respective staffs are tackling this problem to define our requirements more clearly and, if possible, to reach agreement on them. I think we are making more progress than we ever have before, but this is only in the establishment of requirements. It is going to take a considerable time to translate those requirements into dollars and, in turn, into aircraft.

Mr. FLOOD. Then we do not even have the requirements.

General LEMNITZER. Agreed requirements. We in the Army have our own requirements. As we see it, we believe that we may be confronted on short notice at any time with a requirement to move a force from one battle group to two divisions by airlift. We think that the order of magnitude of the kind of emergencies we may be called upon to deal with would range from a single battle group to two divisions.

Mr. MAHON. Do you think it might also include more than one emergency operation?

General LEMNITZER. More than one at a time, I do.

Mr. MAHON. At the same time?

General LEMNITZER. I do.

Mr. MAHON. Are you woefully and hopelessly unprepared for that situation? I assume you think so.

General LEMNITZER. Yes; if we did not have warning to assemble aircraft from all over the world into one place, I believe we would not be able to meet a requirement of moving a two-division force.

Mr. MAHON. Why do not the Joint Chiefs of Staff work this thing out? We have been debating this for years. Why do we not get something done about it?

General LEMNITZER. We have done something about it.

Mr. MAHON. We are not agreed even on the requirement at this late hour.

General LEMNITZER. Within the last year we reached agreement on requirements for general war. This is a special type of requirement. We are sweating it out now and we are working hard on the limited war problem and hope to get the requirement hammered out.

Mr. MAHON. When do you think you will have it?

General LEMNITZER. I would not be so naive as to attempt to forecast when we will reach agreement on this troublesome problem.

Mr. MAHON. Do you think you will reach agreement on this problem within this fiscal year?

General LEMNITZER. I think so. For example, right now, I have a paper on my desk, on which I am making a final study, which our staffs prepared. I believe that will nail down the requirement better than ever before. This will be a major step forward, if we succeed.

Mr. MAHON. I thought you already had the Army requirement.

General LEMNITZER. We have the Army requirement. The problem is to get the other Chiefs to agree with this requirement.

Mr. MAHON. The requirement you are talking about, is that the requirement from the standpoint of the Air Force?

COMPETING REQUIREMENTS FOR AIRLIFT

General LEMNITZER. It is primarily an Army requirement for the airlift required to move Army forces, but it does not get into the field of how much air lift the Tactical Air Force would require to move along with us; they have heavy airlift requirements also. The Strategic Air Command has rather large airlift requirements if they have to be repositioned, an emergency deployment, which I believe in many cases would occur.

Mr. FORD. Even in a limited war context?

General LEMNITZER. Even in a limited war, Mr. Ford, for the reason that if an emergency arises that looks like a rather extensive limited war, it could possibly go beyond limited war—no one can tell what will happen. I think military prudence would dictate taking emergency actions to insure that we are ready for eventualities that may grow out of this limited war.

Mr. MAHON. Including a general war?

General LEMNITZER. Yes.

Mr. MAHON. While you are engaged in the limited war, you are also engaged in setting up the requirements of general war which might erupt at any moment?

General LEMNITZER. In preparing for them; yes.

PRESENT AIRLIFT NOT ADEQUATE

Mr. FLOOD. We have no requirements agreed on by the Joint Chiefs of Staff as yet. It will take a year to do that, then that will demand a certain type and kind of configuration of aircraft of more than one series. The lead time will be anywhere from 2½ to 3 years for any one type of those aircraft. So for at least the next 4 years we do not have adequate airlift to meet the Army requirements—period.

Mr. MAHON. Do you have any comment?

General LEMNITZER. That is a broad, sweeping statement.

Mr. FLOOD. You can be sure of that.

General LEMNITZER. The Army requirements may be to move one battle group for a very short distance. Sure, we have airlift for that. What I am trying to describe as candidly as possible is the nature of the problem. You have a variety of requirements.

Mr. MAHON. It might be helpful to the Committee if you would tell us a little more about the nature of the problem.

General LEMNITZER. The Army is not the only customer for our airlift, as I pointed out. The Tactical Air Force, the Navy, the Marine Corps all may have requirements for airlift. Also the Strategic Air Command.

As a generalized statement, if there are concurrent requirements for airlift and our air resources are spread over the face of the globe—which they are—I do not believe we have the degree of readiness for air transportability of our STRAC that I would like to have.

Suppose the situation developed gradually and we see something coming and we have time to activate or bring into active service the Civil Reserve Air Fleet. This is a big airlift capability. It takes more than a month to bring these people into the service—and to get the aircraft ready. It involves only primarily personnel type of lift. But this does not entirely meet my requirement.

In a situation such as you have mentioned here, in the Middle East or Southeast Asia, where we may have to go in and parachute our equipment and people and supplies—that takes a special type of troop carrier aircraft which can put troops down with their combat equipment.

Mr. MAHON. Which you do not have?

General LEMNITZER. We have some but, in my opinion, we do not have enough.

Mr. MAHON. And it does not have the degree of modernness that you want?

General LEMNITZER. That is correct.

Mr. FORD. Mr. Chairman.

Mr. MAHON. Mr. Ford.

FAILURE OF JCS TO AGREE ON AIRLIFT REQUIREMENTS

Mr. FORD. General Lemnitzer, I cannot believe that as of now there is not an overall requirement imposed on the Air Force for airlift. Whether or not that requirement is agreed to by all services is another factor.

General LEMNITZER. We have our requirements, Mr. Ford. I have them spelled out in precise detail. We have worked on this problem for several years.

Mr. MAHON. You said you had a paper on your desk now that was going to set the requirements.

General LEMNITZER. We were trying to get agreement between the Air Force and the Army on the size of these requirements.

Mr. FORD. As I understand it, the Joint Chiefs of Staff have set forth a requirement. However, that requirement does not have unanimous approval.

General LEMNITZER. This is right.

Mr. FORD. What you are trying to do now is reach unanimous agreement as to what the overall requirement is.

General LEMNITZER. This is correct. Of course, this will stem from the kind of operation which we envisage. For example, say it is in southeast Asia. How big may be the forces required to do a given job in southeast Asia or in the Middle East?

Mr. FLOOD. General White said you had the requirement and the Joint Chiefs have agreed the airlift is adequate to meet the present requirement. I want to know what is the present requirement and how it is to be met. He is right or he is wrong. He said you have a requirement, you have agreed on it, and the airlift is adequate. He is right or he is wrong. Have you? If you have, what is the requirement?

General LEMNITZER. It is not that simple, Mr. Flood.

Mr. FLOOD. He said it was. I agree with you.

General LEMNITZER. It is not that simple.

Mr. FLOOD. That is what the man said.

General LEMNITZER. I am sorry to disagree with General White, but I cannot agree with the statement in that context.

Mr. MAHON. We will resume at 2 o'clock.

AFTERNOON SESSION

AIRLIFT REQUIREMENTS

Mr. MAHON. We will resume the hearing.

When we suspended the hearing this morning we were talking about airlift and Mr. Flood had undertaken to quote a statement made before the subcommittee by General White. I asked that one of you officers get this quotation reviewed. Do you now know what the quotation was?

General LEMNITZER. I have several quotations from yesterday's testimony by General White and I do not find any of them that fit precisely the question that was asked of me by Mr. Flood.

Mr. MAHON. Will you quote the item that seems to most nearly fit it?

Mr. FLOOD. I quote:

The airlift presently available meets the criteria established by the Joint Chiefs of Staff.

It took me an hour to say that, but that is exactly what I said. That is exactly what he said. There we are.

Mr. MAHON. I cannot remember exactly what may have been said before but when we recessed at noon I asked that that be reviewed.

Do you agree with that statement that has just been read to you by Mr. Flood?

Mr. FLOOD. That is General White's statement.

General LEMNITZER. "The airlift presently available meets the criteria established by the Joint Chiefs of Staff."

No, I do not agree entirely with it. As I pointed out, we have reached agreement on what the requirements are in general war, and there is a period of about 10 days in the important initial period in which there are shortages of airlift.

Mr. MAHON. Is that because of the criteria, or what?

General LEMNITZER. That is because the total assets do not meet the total requirements for movements of military forces in the early phase, or first 10 days, of a general war.

FAILURE OF JCS TO AGREE ON LIMITED WAR CRITERIA

Mr. MAHON. Could it be that, even so, this kind of capability meets the criteria of the Joint Chiefs of Staff?

General LEMNITZER. I would have to get a definition as to exactly what criteria were referred to.

In the case of general war, the criteria include the distances to be moved, the numbers of people to be moved, the number of tons to be moved and, as I attempted to point out this morning, we have agreement on this within the Joint Chief of Staffs for general war.

In the field of limited war, the only agreed criteria in the Joint Chiefs of Staff—and this is not a complete statement of criteria by my standards—we do not agree in this field of limited war.

As I pointed out, General White and I are working this out between us and we hope we will be able to get an agreed set of criteria between us, and then it will be up to both of us to present this criteria to the entire corporate body of the Joint Chiefs to see if we can convince them that this represents an agreed position.

Mr. FLOOD. By that time we will have a new Joint Chiefs of Staff and the merry-go-round will start all over again in 3 years.

Secretary BRUCKER. Mr. Chairman, I do not want to inject myself into this but——

Mr. MAHON. We are glad to have you comment.

Secretary BRUCKER. As the responsible head of the U.S. Army, I feel that I ought to say something here.

General Lemnitzer is a member of the Joint Chiefs of Staff and he is also the Chief of Staff of the U.S. Army. He occupies a dual role and I wish to state that I rely completely upon General Lemnitzer. I want, however, to reiterate for your information and for the record my response to similar questions raised previously by this committee.

Two years ago you asked General Taylor and myself the same question. As a result, we had a conference as to what we should do to improve the situation.

ARMY AIRLIFT REQUIREMENTS TRANSMITTED TO JCS

On May 13, 1958, the Secretary of the Army forwarded a statement of the Army's airlift requirements to the Secretary of Defense. The Secretary of Defense returned this statement requesting that all airlift recommendations or requirements be forwarded through the normal JCS channels.

Mr. FORD. What was the date of that communication?

Secretary BRUCKER. May 13, 1958. That was the formal document that I forwarded to the Secretary of Defense.

Accordingly on June 17, 1958, the Chief of Staff of the U.S. Army—General Taylor at that time—submitted a memorandum to the Joint Chiefs of Staff in which he requested that the JCS preallocate sufficient strategic airlift to deploy rapidly the spearhead elements of a 2-division force, 5,840 personnel and 7,438 short tons. The JCS deferred consideration of the memorandum pending completion of the transportation guidance for the Joint Strategic Capabilities Plan.

In this guidance approved on May 19, 1959, the JCS directed the commanders of unified and specified commands to submit to the JCS

for approval the desired modes of transportation and time phasing for inter-and intra-theater movements. To date, no requirements have been approved by the JCS for the unified or specified commands.

I just want to say that I am uneasy about this airlift and I am not going to sit here and quietly say nothing. I am uneasy about it and I feel that this is a major problem that General Lemnitzer has as Chief of Staff of the U.S. Army.

As a member of the Joint Chiefs of Staff, I have the feeling that he is not getting all the cooperation he ought to get and I am not under any compunction one way or the other about talking about the Joint Chiefs of Staff as a corporate body, as I did last year to you. I feel that the Joint Chiefs of Staff should settle this matter themselves and keep at it until they do rather than to confront this committee each year with the problem. If they do not, the Secretary of Defense should answer my communication of May 13, 1958, directly.

Mr. FLOOD. And Daniel came to judgment.

Secretary BRUCKER. No; and he did not come to judgment.

Mr. FLOOD. You are the Daniel.

Secretary BRUCKER. I say to you that I am uneasy about this business and I feel that I am sitting here right on a volcano. Others in the Joint Chiefs of Staff may feel that this is something that can be abided from time to time, but this is something we ought to meet.

Mr. MAHON. I agree with you, Mr. Secretary. I think we ought to meet it and forthrightly and quickly. I have the feeling that this is one of the weakest links in our defense chain. I have felt that way a long time. We talk about it, but we do not get anything done.

Secretary BRUCKER. Right.

Mr. MAHON. We have committee hearings but we do not have direct action.

General LEMNITZER. I agree with that, Mr. Chairman.

REVIEW OF STRAC EQUIPMENT REQUIREMENTS

Mr. MAHON. In an effort to achieve the degree of mobility and flexibility of STRAC, what has been done to reduce the equipment portion of the table of organization and equipment to the very bare minimum in order to make transportation more attainable?

General LEMNITZER. We have, within the last 6 months, been reviewing every item of equipment that would have to be airlifted and we are taking out every item, vehicle, and piece of equipment which can be regarded as not absolutely essential.

We have made some very substantial reductions in lowering the tonnage which is required to accompany a unit, and in this respect we have varying tonnages, depending upon the type of enemy we expect to encounter. For instance, if we go into an area where we are fighting a jungle type of operation, our plans provide for stripping our equipment down to merely the lightest type of arms and very few vehicles, and our lightest vehicles at that.

I would say that on one plan which I recall, we have reduced the tonnage by approximately 50 percent in an effort to reduce our requirements for airlift. We will continue to work on that, Mr. Chairman.

Mr. FLOOD. Is not this true as well? A considerable part of your research and development for years has been devoted to material and metal and equipment of all kinds in your tests to keep reducing weight—keep reducing weight for the purpose of air transport?

General LEMNITZER. This is true. The question was directed, though, to the table of organization and equipment (T.O. & E.) type of equipment. However, what Mr. Flood says is correct. Every time a new piece of equipment comes along we have it examined to determine the types of metals that should go into it. The size and the weight are factors in the design of all of our equipment in order to give it the highest degree of air transportability.

Mr. MAHON. General, if we should reduce our air defense forces in the United States so as to protect only the Strategic Air Command base, how much Army manpower, equipment, and effort will be released for the very important mission of STRAC.

General LEMNITZER. In some cases, the defense of the SAC bases also includes cities and industrial areas. I would have to analyze that, but I can do it and provide it for the record later.

(The information requested is classified and will be submitted separately.)

STRATEGIC ARMY CORPS CONCEPT

Mr. MAHON. There are some who claim that this idea of STRAC is a noble one, but actually more or less an idea on paper and not an idea which has been implemented.

General LEMNITZER. Is that a question?

Mr. MAHON. I am reading here from a statement which has come to me and I quote:

> I hope you will be interested in the following facts: First of all, if this letter is made public, reprisals will likely be made against me. The Army seems desperately afraid that the truth will become known. I can only hope that you will investigate these allegations. First of all, STRAC from this level is a large joke. The unit of which I am a member is about as combat ready as a Sunday School class.
>
> Secondly, there is a shocking waste of money, equipment, and man-hours. We just finished an alert and I wish that you could hear the comments. If men in the unit could talk freely with no fear of reprisal, you would hear some frightening facts. Please do something about the general situation.

I did not vouch for that statement in any sense but I read it in order to be provocative. I do not know how widespread that view might be, but I would like to hear your comments.

General LEMNITZER. It is a very provocative statement and I would disagree with it 100 percent.

The idea of STRAC makes military sense and it makes economic sense. You cannot have forces deployed every place in which there might be some requirement at a future date.

Mr. MAHON. I do not think the man who wrote this is quarreling with the idea of STRAC.

General LEMNITZER. He seems to be quarreling with almost all aspects of STRAC.

Mr. MAHON. He seems to think that this is merely an idea, but with no substance.

General LEMNITZER. In that respect, I would disagree vigorously with him also. I would like to invite him to Fort Campbell, Fort

Lewis, Wash., or Fort Bragg, where our three STRAC divisions are located, and I could shoot down everything that he said in that letter.

Mr. MAHON. In other words, this is a meaningful organization?

General LEMNITZER. Indeed it is. It is made up of many thousands of highly trained men, well equipped and ready to go. As a matter of fact, I do not consider that there is any military organization in the U.S. forces, or in any other forces for that matter, that is better trained or ready to go.

Mr. MAHON. That is good.

DEFFERRED MAINTENANCE

The committee should be provided with a listing of the deferred maintenance to which you referred, Mr. Secretary. That is, maintenance projects as of some recent date as a corollary to the comments about increasing dollar amounts of deferred maintenance.

Will you supply some information on that at this point?

Secretary BRUCKER. I will. I have each of the years 1959–60 and the estimated 1961 figures here in total.

Would you like to have that itemized as to what things——

Mr. MAHON. You might supply the committee with some detailed information.

Secretary BRUCKER. We will.

Mr. MAHON. Maybe we will not want to put too much on the record.

Mr. FORD. We have always had a summary on an annual basis, just a figure, so we could compare it one year to the next.

Mr. MAHON. All right; supply that at this point and we will have a look at it.

Secretary BRUCKER. Do you want to to state it on the record?

Mr. MAHON. No; please submit it.

(The material referred to follows:)

The worldwide backlog of deferred facilities maintenance, in terms of estimated costs of essential repairs, is:

Fiscal year 1959: $114 million (actual).
Fiscal year 1960: $126 million (estimated).
Fiscal year 1961: $138 million (projected).

Mr. MAHON. On page 26 of your statement, Mr. Secretary, you make an off-the-record comment in regard to capabilities made necessary by some of the activities of the Soviet Union in a certain field.

Will you comment on that off the record in regard to what you have in mind?

(Discussion off the record.)

EVALUATIONS AND TESTS OF PRODUCTS OF RESEARCH AND DEVELOPMENT

Mr. MAHON. In both your statements, gentlemen, you refer to evaluations and tests of the products of research and development. Has any progress been made in reducing the testing time on new or improved items?

This question is put to you with one example in mind, the improved ¼-ton jeep contracted for in quantity in 1959. It is said that our opponents are able to do these things much more rapidly. Are we making any progress in that field?

General Wood, could you discuss that?

General Wood. Yes, Mr. Chairman. I will cover that in some detail when we get to research and development, but I can say the answer is "Yes." We have been able to reduce leadtime, particularly by revamping our administrative processes. We have issued a new regulation after considerable study on that subject. In many cases, in order to save time, we also have been able to combine what we call engineering tests and user tests rather than have them in sequence. It is difficult with only 1 year's experience with this regulation, to estimate a general reduction across the board.

Reductions will not be apparent until 2 or 3 years have elapsed.

I believe we have made considerable progress and it is an area which we give, and will continue to give, considerable attention.

Mr. Mahon. As the Secretary of the Army, Mr. Brucker do you think, in your bones, that we are making headway on this or are we just talking about it?

Secretary Brucker. With respect to the cutting of the leadtime?

Mr. Mahon. Yes. You have an idea and you put it into practice and the time it takes you to get it with the troops.

Secretary Brucker. I think we are, Mr. Chairman.

I think that is reflected by what General Wood has said here and by the general sense of urgency that we have in research and development and procurement working together in that field.

Frequently we have conferences on that subject—discussions, briefings, and so on—and I will not take your time and the time of the committee now to go into any further detail unless you want to.

General Lemnitzer. Could I give an example in this connection?

Mr. Mahon. Yes.

General Lemnitzer. I think our PERSHING missile program is an example of what can be done in this regard. The period of time from the development until our program calls for putting this important weapon into the hands of the troops is much shorter than it was when we first went into the business of developing missiles like the REDSTONE, for example.

MODERNIZATION OF EQUIPMENT

Mr. Mahon. We talk about the battlefield environment in a new type of war, unlike World War II or the Korean war. We have devised certain mechanisms, certain communication systems, certain electronic gear, and so forth.

In addition to just talking about this, are we coming up with answers and putting them in the field with the troops?

General Lemnitzer. Some of the new equipment which the Secretary referred to this morning is exactly that type of equipment. Regarding land mobility as an example, the M–113 lightweight personnel carrier with aluminum armor—that is a tremendous step forward from our old M–75, which is heavier and much slower. The next generation was the M–59, a steel armored carrier and much heavier and not as fast; so on the question of land mobility we have made great improvement, as to air mobility, some of our new helicopters and fixed-wing aircraft will give us a great deal more mobility than we have ever had before.

The aircraft which I mentioned, like the CARIBOU, will give us much greater mobility on the battlefield.

Mr. MAHON. Will you tell us something of the tests you are going to carry out at Fort Huachuca in Arizona with respect to communications equipment and similar gear?

Secretary BRUCKER. Yes; Fort Huachuca is, of course, the Signal Corps proving ground. There we conduct tests not only on surveillance drones, but also on all of the battlefield communications systems. Fort Huachuca also has a very large laboratory with computers and electronic equipment.

TESTING PROGRAM AT FORT HUACHUCA

Mr. MAHON. I am speaking more specifically of the special test that you mentioned. How much is that test going to cost?

Secretary BRUCKER. I did not refer to any test in my conference here or my discussion.

Mr. FLOOD. What was the question?

Mr. MAHON. How much money will this test that is being considered cost?

General LEMNITZER. I think you are probably referring, Mr. Chairman, to the equipment. We have some 20,000 electronic items in a division. They have to be compatible with one another and they have to have a high degree of immunity against enemy jamming. It is that kind of a test.

Mr. MAHON. And they must not jam each other?

General LEMNITZER. That is correct.

Mr. MAHON. As I understand it you were trying to contract a lot of the work done on this testing. What is the score on that?

General WOOD. We are setting up there what we call the electronic environmental test facility. It will cover an area which will be roughly equivalent to what a division will occupy in a corps environment on a dispersed battlefield, 50 by 60 miles, approximately.

We are reproducing there the problems which a division will run into insofar as communications, radar, fire control, surface-to-air missile defense (all of which are electronic devices), to make certain, first, that our sets will not interfere with each other, and second, what the problem is so far as the enemy is concerned. That consists of his capability to jam us and our capability to be immune to jamming.

Mr. FLOOD. What about weather problems?

General WOOD. Weather, also; yes, sir. It is roughly a 2-year project, on which we are just starting. We are going at it in steps. We will be able to begin testing there this calendar year from the standpoint of a company. We will have a company there.

Mr. MAHON. What do you mean by "a company"?

General WOOD. A company of infantry—then we will work up to larger units until 2 years from now we can reproduce, in many cases, similar equipment and people and the problems that a division will undertake.

Mr. MAHON. Is the Signal Corps going to do all of this work?

General WOOD. Yes, sir; the Signal Corps will do most of it by contract.

Mr. MAHON. In other words, the Signal Corps is not going to do the work?

General WOOD. No, sir. This is a Signal Corps proving ground.

TESTING TO BE DONE BY CONTRACT

Mr. MAHON. Who is going to do the work?

General WOOD. The initial contract has not yet been awarded.

Mr. MAHON. How big is the contract?

General WOOD. For this year (fiscal year 1960) it is in the order of $8 million or $9 million.

Mr. MAHON. What will it be the following 2 years?

General WOOD. I do not have my figures with me, but I will supply that.

I think the total cost runs about twice that much, including the operation of it. The contract will be an installation and operation type thing.

(The material referred to follows:)

The estimated costs of a contract for a 2-year period for installation and operation of the electronics environmental test facility for fiscal years 1960 and 1961 are:

Fiscal year 1960: $9 million.

Fiscal year 1961: $9 million.

The projected cost for fiscal year 1962 is $10 million. However, this cost is dependent upon the experience gained in the initial period of operation, and the projected test program for fiscal year 1962.

Mr. MAHON. You will pay a private company to evaluate your situation?

General WOOD. No, sir. The approach is for a private company to install and operate a facility under the auspices of the Signal Corps which runs the installation just as the Ordnance Corps runs White Sands. The Ordnance runs the installation, but the contractors do most of the firing. The final evaluation of the operation will be done by the military.

Mr. MAHON. These contractors will test this equipment from the standpoint of reliability and interrelationship and compatibility with other equipment?

General WOOD. That is exactly right.

Mr. MAHON. Will these people be testing their own equipment?

General WOOD. No, sir; they will be testing equipment designed according to Army specifications.

Mr. MAHON. It will have been designed by others having nothing to do with testing?

General WOOD. The organization getting the contract will participate in the test program design, testing, recording, and data reduction. The equipment tested will be Army equipment, most of which is either already in production or will be soon.

Mr. MAHON. Who will have produced this equipment?

General WOOD. A whole variety of electronic contractors.

Mr. MAHON. Not the people testing it?

General WOOD. I would say that is unlikely. However, it may be that an item of equipment already produced by that company will be one of the ones in the Army inventory.

Mr. ANDREWS. Mr. Chairman?

Mr. MAHON. Mr. Andrews.

Mr. ANDREWS. Will the Army buy the equipment or will it be rented?

General WOOD. In the main, the equipment to be installed for purposes of running the range will be bought, except for certain items like computers which normally it is cheaper to rent.

Mr. MAHON. We are talking about two types of equipment. We are talking about test and evaluation equipment and then you are talking about the equipment used by troops which is to be tested. That is what you have in mind, the testing of that equipment?

General WOOD. That is right.

Mr. MAHON. You think it will take about 3 years to do this job?

General WOOD. It will take 2 years to complete the facilities.

Mr. MAHON. What do you hope to learn from this test?

General WOOD. We hope to accumulate data which will be helpful to us insofar as predicting the electronic environment of the battlefield.

Mr. FLOOD. Will it include television?

General WOOD. It will include television: yes, sir.

Mr. ANDREWS. May I ask one other question?

Mr. MAHON. Yes.

FUTURE USE OF TESTING RANGE

Mr. ANDREWS. Will you continue to use the equipment or will your use come to an end when you finish your first test?

General WOOD. The equipment to be installed to equip a range?

Mr. ANDREWS. Yes.

General WOOD. We contemplate it will be used indefinitely, because the area of electronics is probably the most dynamic of any area in research and development. You are aware of the great strides made by the electronic companies in transistors, microminiaturization and what not, all of which makes possible the uses of more equipment which overloads the electronic spectrum. The frequency spectrum is not unlimited and every weapon system we divise pushes the state of the art insofar as electronic material is concerned. Then we have the business of competing with the enemy on jamming which we call electronic countermeasures, or, on the other side, counter-countermeasures, which is endless. It is a question of what he gets and what we get in an effort to make our work effective and stop his work, and vice versa.

Mr. FLOOD. This has been your Achilles heel in the Army in the Louisiana maneuvers and other places for 5 years?

General WOOD. It has certainly been a problem area, Mr. Flood. There is no doubt about it.

Mr. MAHON. We will want a report on that from time to time as this progresses.

General WOOD. Yes, sir.

TACTICAL NUCLEAR WEAPONS

Mr. MAHON. General Lemnitzer, you say on page 10 of your statement:

> * * * The use of nuclear weapons, or the threat of their use, has vastly changed the battlefield and tactical concepts of land as well as other forms of warfare. Because of the greater destructive power of these weapons, the modern battlefield will be characterized by greatly extended combat areas and dispersed situations * * *.

Will this test at Fort Huachuca relate in any way to this statement?

General LEMNITZER. Yes, it will, because the layout of the divisional units will be spread out over a much greater area than during World War II and the Korean war. In other words, it will represent the dispersion which we expect that our divisions will be required to adopt, if there is a threat of nuclear weapons in the particular action which they may be engaged in.

I believe that will prevail from now on. There will always be the threat of the employment of nuclear weapons until they are banned or under strict control.

Mr. FLOOD. You are speaking of what we call technical field weapons?

General LEMNITZER. Yes, tactical nuclear weapons.

NIKE-ZEUS PROGRAM

Mr. MAHON. What did you ask of the Secretary of Defense. Mr. Secretary, with respect to the NIKE-ZEUS program, and what did you get? Was it ample?

Secretary BRUCKER. I will answer your question directly for 1961 and if there is anything further we will go back to it.

Mr. MAHON. All right.

Secretary BRUCKER. For 1961 we asked for $328 million for R.D.T. & E. and $15 million for "Military Construction, Army."

I guess that briefly answers your question, but do you want me to go further with respect to that?

The Congress during the past session appropriated $382.6 million, in addition to the President's budget, which included $137 million for preproduction planning for the NIKE-ZEUS.

In the interim we were permitted to go ahead with the research and development and we requested that we be authorized to go ahead also with its preproduction.

On October 22, 1959, I sent a formal communication to the Department of Defense asking that the whole amount, $137 million, be released for that purpose.

Mr. SHEPPARD. What purpose?

Secretary BRUCKER. Preproduction; $137 million for preproduction purposes, to make the equipment that should be available to phase into production at the earliest possible time.

On December 1, 1959, we received a written communication from the Secretary of Defense, just before Secretary McElroy went out

of office, declining to do that and saying that we would not get the money for the preproduction, the $137 million, and that we should not plan on it.

We were permitted to go ahead with the $287 million for R.D.T. & E. and $15 million for MCA and that is NOA for 1961. That would include Johnson Island and Kwajalein Island tests whereby we would launch a NIKE-ZEUS missile against one of the ICBM's or IRBM's, one or both, and other tests out there. They were batted down and that is the situation at the moment with one little modification I ought to mention.

EXPENDITURE LIMITATION ON NIKE-ZEUS

At the present time—you notice I have been talking about NOA in connection with RDT and E—at the present time I have been informed by the Director of Research and Development of the Army, Mr. Morse, that Dr. York has placed a limitation upon the $287 million by putting an expenditure ceiling on that for spending.

Mr. MAHON. What kind of a limitation?

Secretary BRUCKER. A limitation of $200 million.

Mr. MAHON. That cannot be spent?

Secretary BRUCKER. That can be spent.

Mr. FORD. During fiscal year 1960?

Secretary BRUCKER. Fiscal year 1961; during that year.

At the present time we have been orally informed by Dr. York, as our Research and Development Director, that without reference to the $287 million of NOA, that our expenditure limitation will be $200 million.

That has been taken up with the Director of Research and Development and also with the Deputy Chief of Research and Development, General Wood.

There is, of course, a great deal of dismay about that because that will not be sufficient to do the job of research and development so that from that point I have gone to the Secretary of Defense and told him the story, that the research and development upon ZEUS is expected to go forward. Statements have been made by the administration, by all concerned, that while the preproduction money was not going to be released, research and development would go forward at full speed.

The Secretary of Defense has been busy testifying in this matter, of course, and he has heard me and said he will get into the matter and have Dr. York and Dr. Morse and General Wood confront one another and bring this to a head.

This is the precise matter at the moment and I have no doubt that we will be able to come to some conclusion on that very shortly, but the concern that I express is about the fact that while we are stopped on the production the research and development should go along full speed and not be delayed.

Mr. MAHON. Has it been delayed yet?

Secretary BRUCKER. Not yet, but that is just why I am making the statement here, that a limitation on expenditures causes a delay or slowdown which reflects in the efficiency of an organization, as has been explained to me, and the minute that that occurs, the whole organization is set back in its efforts and there is a resulting time lag in utilizing the funds available.

Mr. FLOOD. I would like to observe that it is very curious that this same series of conditions and cautions have never been imposed in connection with the BOMARC program. They are spending millions and millions and hundreds of millions and billions to build the BOMARC.

Mr. MAHON. Let us not get into the BOMARC right now.

I would like to get this straight. You are talking about fiscal year 1960 money?

Secretary BRUCKER. 1961 money.

Mr. MAHON. You are talking about 1961 money?

Secretary BRUCKER. That is right.

Mr. MAHON. The limitation will be imposed in 1961?

Secretary BRUCKER. That is right.

Mr. MAHON. That will follow action by the Congress?

Secretary BRUCKER. That is right.

We are counting on the research and development going right ahead full speed on NIKE-ZEUS. If the NOA of $287 million is to be reduced by an expenditure ceiling, what I am saying to you, Mr. Chairman, is that I have brought the matter to the attention of the Department of Defense directly, so we may know now and not later on, how far we can go into testing.

Mr. MAHON. What about the $15 million having to do with construction?

Secretary BRUCKER. That has to do with Kwajalein and Johnson Islands for the launching and tests.

Mr. MAHON. There is no restriction on that?

Secretary BRUCKER. None so far.

Mr. MAHON. Recapitulating, what is the total amount in the 1961 budget for the ZEUS program?

Secretary BRUCKER. That exact figure I gave you: $287 million for research and development and $15 million for MCA.

There is nothing in the budget for preproduction. The total is $302 million.

DEFENDER SYSTEM FOR ICBM DEFENSE

Mr. MAHON. What about the DEFENDER system. The Secretary of Defense talked to us about the DEFENDER system.

Secretary BRUCKER. I think that is something you ought to get a statement from General Wood about, Mr. Chairman, because—I will put a period after the word "because." I have some strong feelings about it, and I would rather he stated what it is.

General LEMNITZER. While General Wood is looking up the details, the DEFENDER program is a program to explore all other possible ways and means of providing a defense against a missile attack. That, in general, is what the purpose of the program is.

It has quite a number of facets and I think General Wood has the details.

Mr. MAHON. All right, General.

General WOOD. I am not certain I have the information with me, sir.

General LEMNITZER. I would like to give this to you off the record, Mr. Chairman. It is very, very, highly classified.

Mr. MAHON. Off the record.

(Discussion off the record.)

Secretary BRUCKER. If there is any decrease in the amount of the $287 million upon the only system at the present time that has any chance either in the time frame or otherwise, it ought not to be starved for the purpose of having basic research on something that, regardless of what we say about it, whose project it is, is way out in the future.

Mr. ANDREWS. May I ask a question?

Mr. MAHON. Yes.

Mr. ANDREWS. You say, ARPA is handling the DEFENDER system?

General LEMNITZER. That is right.

Mr. ANDREWS. Is any service sponsoring it? Does the Air Force have anything to do with it?

General LEMNITZER. No: it is a Department of Defense project at the present time, but I think it is relying on all the services to contribute to these studies which they are making.

Mr. ANDREWS. How long have they been working on the DEFENDER program?

General WOOD. I am not certain, sir. I would say in the order of 18 months.

Mr. ANDREWS. How long have you been working on the NIKE-ZEUS program?

General WOOD. The NIKE-ZEUS program was initiated about 4 or 5 years ago.

Mr. ANDREWS. Do you know whether there is more money in this budget for the DEFENDER program than there is in the ZEUS?

General WOOD. I do not know the funds.

Mr. ANDREWS. What about it, Mr. Secretary?

You seem disturbed about it.

Secretary BRUCKER. I am only disturbed because I understand the program exceeds $100 million for basic research. I was trying to draw attention to the fact that basic research is fine, but when you have a system which is as far along as the NIKE-ZEUS, the research and development phase should be pressed just as rapidly as it can. I think it is only fair to say this on the record here, and I do not want in any way to be understood as being critical except that I think our country is involved in this and the defense against these ICBM's. I have not heard of any responsible person in the scientific field who contends that the NIKE-ZEUS will not be able to bat down an incoming ballistic missile—singular.

The question comes about when it is plural.

I would like to go off the record.

Mr. MAHON. Off the record.

(Discussion off the record.)

NIKE-ZEUS PROGRAM

Mr. MAHON. Will you please advise what the Army requested of the Secretary of Defense for the NIKE-ZEUS in addition to the research and development funds to which you have already made reference?

Mr. MAHON. I just want to know the round figures.

General LEMNITZER. It is broken down into MCA and PEMA.

Mr. MAHON. I just want to know the round figures.

General DUFF. The additional amount to go into production which was recommended was $1.2 billion approximately.

Mr. MAHON. Did you ask the Department of Defense for $1.2 billion to go into production in fiscal year 1961 for the ZEUS?

General DUFF. From the standpoint that we had a figure we could not exceed and therefore it was not included within the budget as presented, but it was indicated as an additional requirement that would have to be funded from sources outside the Army ceiling.

Mr. MAHON. What did you ask for in addition to this add-on for NIKE-ZEUS production, or is that it?

General DUFF. It was approximately $1.2 billion, sir.

Mr. MAHON. That was an add-on, but you did not ask for any funds beyond research and development for NIKE-ZEUS except this add-on money to which you referred?

General DUFF. $1.2 billion.

Secretary BRUCKER. Production and construction money.

Mr. MAHON. Did you feel pretty strongly about that production money at that time, Mr. Secretary?

Most everybody but the Army is highly skeptical of the probable success of this proposed weapon.

Secretary BRUCKER. Mr. Chairman, they said the same thing about JUPITER and I sat right here and stood my ground on it 4 years ago. JUPITER is hitting them right now so close—would you call ——— pretty close at 1,500 miles?

I heard it derided and a lot of things said about it, that you will never be able to get it and so forth, but we got it.

I have the same feeling myself about NIKE-ZEUS. I am not a research and engineering man, not a scientist, but I have talked to them and I have seen these articles that they have and I know what they do. Personally, it makes no difference as to my view—that does not make any difference at all—but the Army is going to follow exactly and to the letter what has been decided.

That is the decision of people responsible.

Mr. MAHON. You have full confidence in it and would like to proceed with the production?

Secretary BRUCKER. As far as I am concerned personally, I have confidence in the NIKE-ZEUS.

As I say, I am not pressing that point nor am I here for that purpose.

Mr. MAHON. I understand that, but I am trying to get your deep down conviction with respect to this and I would like to get the same thing with respect to General Lemnitzer.

Do you think we are making a mistake by not going forward with production on NIKE-ZEUS?

General LEMNITZER. Yes, I do, but I would like to discuss it off the record.

Mr. MAHON. Off the record.

(Discussion off the record.)

Mr. MAHON. How much would it cost to set up a ZEUS defense for our ICBM bases in this country? If you could, you could also protect the SAC bases. If you could protect your ICBM bases and your SAC bases you would have it made?

General LEMNITZER. I would like to go off the record.
(Discussion off the record.)

ICBM STATEMENT

Mr. MAHON. General Lemnitzer, do you foresee that the United States may accumulate a considerable number of ICBM's in operational status and that our opponent would have the same or a greater capability, and that as a result we may approach in the 1960–70 decade a period of so-called ICBM plenty as between us and our opponent? Do you anticipate this might result in more or less a military stalemate and that there possibly could be a major war without the use of such things as the ICBM's?

General LEMNITZER. Yes. As I indicated in my statement, I believe that a period of so-called nuclear stalemate is possible. It is very likely. I think it is almost here.

Mr. MAHON. Do you mean you believe there could be a major war between major countries which have nuclear capability, including ICBM's, when these weapons would not be used?

General LEMNITZER. I believe it possible to anticipate that there would be a war without necessarily the use of ICBM's, although I believe small yield tactical nuclear weapons would be used in such a war.

Mr. MAHON. Do you mean large nuclear weapons by the Strategic Air Command?

General LEMNITZER. I am thinking more of the tactical sized nuclear weapons.

Mr. MAHON. A few years ago we went into these matters in quite some detail before the committee and it seemed to be the general consensus of people such as the Joint Chiefs and the Secretary of Defense and others that if there were a war of any consequence, say in Western Europe, nuclear weapons would be used.

General LEMNITZER. That is the general consensus, yes—that if there were a major war in Western Europe, nuclear weapons would be used.

Mr. FLOOD. That is not a premise. I think that everybody agrees to that. There is no reason why that premise should not be stated. It was well stated and the answer is as the general has said. But these wars, and rumors of wars, about which you and I and the Bible talk are not going to involve the three or four major powers that have the ICBM's. There will be satellites and allies of satellites, and regional arrangements politically inspired and dealt with that are going to kill millions of people in the years ahead on battlefields on which there will be tactical field weapons only and no ICBM's will be fired.

Mr. MAHON. Do you think we may have to spend vast billions of dollars for ICBM's and defenses against ICBM's and thereby produce a stalemate and at the same time we have to have all the modern equipment necessary to fight a conventional type war?

General LEMNITZER. I believe that we have to have a strong capability across the entire spectrum of war, and you have outlined the entire spectrum. I think it is absolutely essential that this country have an invulnerable retaliatory force adequate to deal with the

situation we are talking about. I believe, though, that having that capability alone is not enough. We have to be prepared to deal with any capability the enemy has throughout the whole spectrum of general war through limited war down to the smallest type, to subversion and infiltration.

POLARIS PROGRAM

Mr. MAHON. One of the members of the Joint Chiefs said in a speech that 45 POLARIS submarines could clobber the Soviet Union. What do you think? In your planning and in your discussions you have no doubt discussed time and time again the POLARIS program. Do you think that this is a step in the right direction and do you think it has the capability suggested?

General LEMNITZER. I strongly support the POLARIS concept. It provides yet another retaliatory weapon that has a great advantage of being mobile and very hard to detect and locate. It has not been tested completely, though today, or day before yesterday, they had still another successful launching. I think that it offers great promise. I personally am not for putting all of our eggs in one basket in any type weapon. I am strongly opposed to a one-weapon strategy. I feel that the POLARIS submarine offers a tremendous capability in the field of retaliation, yes; but it will not supplant or eliminate the requirement for mobile land missiles of the MINUTEMAN type. I think that we need to have a comprehensive inventory of all of these types of weapons.

MISSILE GAP

Mr. MAHON. Do you think in order to shorten the missile gap and close it faster we ought to go as rapidly as possible with the ICBM program in this country?

General LEMNITZER. You say, "as fast as possible." This requires definition. I think that I can answer your question without getting into the question of numbers and things of that character.

I believe that as long as we have a strong bomber capability, which we still do, we should proceed with reasonable caution on this program and not get overloaded with first generation missiles which are large, cumbersome, and not rapidly responsive. They are quickly responsive, and I would say that it would be a mistake to devote all of our resources merely to produce first generation types of ICBM's. It will only be a matter of a year or so before you will have to discard those and replace them by more modern types of missiles.

CONSIDERATION OF ICBM PROGRAM BY THE JOINT CHIEFS OF STAFF

Mr. MAHON. Did the Joint Chiefs of Staff discuss the ICBM program and what we probably ought to have?

General LEMNITZER. Yes.

Mr. MAHON. And you generally feel, do you, the program as outlined for the fiscal year 1961 in the missile area is adequate, reasonably adequate?

General LEMNITZER. Yes, I do. When you are speaking specifically in 1961 of the ATLAS, the TITAN and the POLARIS programs, yes.

Mr. MAHON. You think that they are reasonably adequate?

General LEMNITZER. I think that they are reasonably adequate programs; I do.

Mr. FORD. Was there unanimity in the Joint Chiefs on the adequacy of the ICBM program for the fiscal year 1961?

General LEMNITZER. I do not think we ever discussed it in specific terms of numbers; that is, the number of TITANS versus the ATLAS squadrons, and so on. But in the discussions in which I participated I would say that there was general agreement on the overall ICBM, or POLARIS, type program—retaliatory missile program, let us put it that way. I think that is more descriptive of it.

NIKE-ZEUS PROGRAM

Mr. MAHON. Was there general agreement among the Joint Chiefs on the NIKE-ZEUS program?

General LEMNITZER. There was not.

Mr. MAHON. Did both the Navy and the Air Force oppose the production phase of the ZEUS?

General LEMNITZER. Yes. They felt that it was premature to go into production on NIKE-ZEUS. I, on the other hand, took an opposite position.

B–70 BOMBER

Mr. MAHON. What position did you take in discussions on the B–70 long-range bomber? That seems to be one of the controversial matters before us.

General LEMNITZER. I saw the advantage of having an aircraft of the type of the B–70.

Mr. MAHON. Mach 3?

General LEMNITZER. May I discuss this off the record?

Mr. MAHON. I do not see why.

General LEMNITZER. I am talking about capabilities and why I supported it. As long as this record remains classified and not public——

Mr. MAHON. You take off what is necessary.

General LEMNITZER. I still have some concern regarding the importance of getting into the enemy country and seeing what has happened. I am not convinced that we know, or that we will ever know, where everything is which we would like to strike with missiles.

Mr. MAHON. Yes.

General LEMNITZER. I still have my doubts that, when you launch a missile and see it leave your area, you can be assured it is hitting what you want to hit; so I still believe there is an urgent and important requirement for reconnaissance. Therefore, I supported the B–70, not on the basis of a weapons system, but as an aircraft. I supported the B–70 as a research and development program to see whether a larger aircraft of this configuration could be produced in the period that we are talking about.

Mr. MAHON. You supported the program before Congress for a couple of prototypes?

General LEMNITZER. That is correct.

Mr. MAHON. You do not feel you ought to go further in a weapons system at this time?

General LEMNITZER. That is right.

Mr. MAHON. That was, I assume, the Navy's position?

General LEMNITZER. No; I do not believe so. I do not like to speak for Admiral Burke, but I am under the impression that he was not in favor of the B–70 program even to the degree that I supported it.

As an explanation further of why I supported the idea, the development of two aircraft as research vehicles inevitably involved the B–58 program. One of the reasons that I supported the B–58 program was to squeeze out of the program the maximum advantage that we could, and I had in mind the idea of reconnaissance, getting in, getting a look-see, and also to complicate the enemy's planning problems by giving him a variety of targets to have to defend against.

Mr. MAHON. That is very interesting. I like the way you testify.

CONVENTIONAL VERSUS NUCLEAR AIRCRAFT CARRIER

We have before us a request for funds for a conventional carrier. We have been arguing about this question for several years. Last year we had a request for a conventional carrier and Congress provided funds for long lead items on a nuclear-powered carrier. Now we have the same controversy before us again. What position do you take with respect to a nuclear-powered carrier in this atomic age?

General LEMNITZER. In our discussion of this particular program, I was convinced by the Navy in their presentation of their program to me that in order to maintain, I believe, 14 carriers active, or about the deployment we presently have, when 1965 came along they would need a replacement carrier; and it was for that reason I supported a carrier, a conventional carrier. I am as much interested in nuclear propulsion, I guess, as anyone. However, I felt that there were requirements for funds across the board in the three services that could make better use of the differential in cost than by putting it into a nuclear propulsion. If we had a completely nuclear-propelled Navy, probably I would have thought differently; but this carrier, if it was nuclear, would still be operating with a majority of the ships in the task force with conventional type of propulsion. For that reason I made the differentiation between the nuclear and conventional carrier and decided that the $100 million, or whatever the difference in price was, could be used to better advantage in solving some of the other problems that we are talking about. That was my position.

JOINT CHIEFS OF STAFF

Mr. MAHON. I have felt for several years that the Joint Chiefs of Staff have downgraded themselves by failing to face up to some of these hot and controversial and difficult issues.

Now, from the testimony I have heard this year I feel that the Joint Chiefs have upgraded themselves in realistically considering as a corporate body the highly important and explosive issues. Do you feel the Joint Chiefs should consider these explosive issues over which the services have differences of opinion?

General LEMNITZER. I think it is absolutely essential. There will not always be agreement. There is difference of opinion in less important matters than these all over this city and throughout the

world. But I believe it is absolutely essential for these problems which have such far-reaching military implications, not to mention all the others, to be discussed and considered by the Joint Chiefs.

Mr. MAHON. Had we listened to the military and to congressional groups, we would have been appropriating during the last few years not $40 or $41 billion for the Defense Department, but probably $45 billion or $50 billion in order to proceed more rapidly with many types of programs, including the ZEUS, including more men in the Army and more Marines and many other things such as antisubmarine warfare.

Do you feel in retrospect that probably we have made a mistake in not going further and faster in certain areas which would have greatly increased the defense budget in recent years?

General LEMNITZER. That is a problem that I cannot answer with any degree of assurance. Our business is to take a look at the military situation with which we are confronted, to determine what is required and deal with it; and it is true that the price tag of what we as individual service chiefs would like to have usually comes to an amount higher than in the budget. These are the tough problems that confront the proper authorities in the Pentagon, in the Congress and in the executive branch. I believe that this always will generally be true. Unless you can get a picture from the professional people who deal with these types of problems, then you have no real indication of how much of a total amount that should be allocated to these various projects. We are unable to determine how much this country can afford. It is not properly our business. But when we put together an objective plan we put into it our best judgment as to what we feel we would like to have to accomplish the missions assigned to us.

Mr. MAHON. You have not quite faced the question which I undertook to ask. Has our failure to do these things impaired our security and maneuvered us into an unnecessary position of danger as a nation during this 1960–70 decade, in your opinion?

General LEMNITZER. In looking back, I can say obviously not in the last couple of years, because nothing has occurred to jeopardize the military security of this country. That is the real test of adequacy. To say now whether something is adequate for 1961 or whether what we did in 1958 was adequate—these are two entirely different problems. Obviously, since we did not get into any kind of a war and did not damage our security in 1958, what we did in 1958 must have been reasonably adequate.

Mr. MAHON. Can we face this decade safely?

General LEMNITZER. In 1961 we do not know what will occur. There is certainly an element of risk, as there always is, in the rate that we are proceeding.

NEED FOR INCREASED MILITARY BUDGET

Mr. MAHON. Are we making a mistake by not proceeding probably with a $45 and $50 billion budget to accommodate certain views such as some that you have expressed here today? I am not discussing the economic factor.

General LEMNITZER. I cannot categorically answer that type of question. Certainly, we could do a better job with more resources

and give a greater degree of security to this country—all services could if they had more money. That is true. But the converse is not true. By that, I mean that if we are going to continue at this present pace we are not going to seriously jeopardize the security of the country. The Commander in Chief thinks not, and weighing all the various projects and programs which he must consider, this particular budget is what he considers to be a reasonable defense budget.

Mr. SHEPPARD. I would like to deviate from the missile aspect for a moment. There is a difference of opinion. I believe in the fundamental approach to this issue, and that is this: The whole crux of the situation is that we have ourselves in a position where we are confronted with Russian leadership that is quite unpredictable. We do not know what they are going to do. There is nothing in history that you could use as a yardstick for evaluation with any degree of certainty. If that is the case, then I say: How much am I willing to give up of the modern-day conveniences in order to write an insurance policy that will be effective? Because if it is not effective and it does not become operational, then all of the little things that I like are all washed up.

It goes back to your discussion about the ZEUS. I heartily agree with you. Even though it is not 100 percent perfect, it is something in being against a potentiality of 10 or 15 years hence. The question is: How much can we afford to take this extra hazard, call it what you may? We have some very wonderful gentlemen analyzing this picture from day to day, and though I do not agree with them, we have to live with them. In discussing your budget and your own inclinations, I think that I can fully understand your position and its reservations.

You, Mr. Secretary, are charged with conducting the affairs of the Army with your associates and you are given certain financial limitations within which you have to live. I might draw a parallel. I might say to my family: "We are budgeting our household affairs and here is $500 a month, and while you might like to have additional things in the house, it is $500 and no more."

That is a parallel, but you have to live somewhat with that philosophy, as I interpret the entire picture, and when you are called upon to express your personal views you find yourself, obviously, in an embarrassing position. I do not envy the position that you occupy at all. Fortunately for me, I do not find myself in that position.

RESEARCH AND DEVELOPMENT BUDGET

Now, what do you have in your research and development funds for 1961, irrespective of whether it is for ZEUS or not?

Secretary BRUCKER. $1,041,500,000 total for "Research, development, test and evaluation, Army, 1961," direct obligations.

Mr. SHEPPARD. What was the comparable figure for last year?

Secretary BRUCKER. The same direct obligations for 1960 were $1,101,375,000.

Mr. SHEPPARD. Out of the total amount appropriated last year, how much is under the direction of the Army for expenditure purposes, literally under the direction of the Army?

Secretary BRUCKER. $1,027,500,000, direct obligations.

Mr. SHEPPARD. Out of that figure that you just gave me that went into research and development, what proportion of that amount was expended for construction purposes in line with research and development requirements?

Secretary BRUCKER. This is all for strictly research and development. None of this is military construction money.

Mr. SHEPPARD. I did not state my question properly. Hypothetically, here is X firm, and you are assigning a research and development project to the firm. They find themselves in a position where they need expanded facilities, and as the prime contractor in that operation it is my understanding he has a right to spend it with your acquiescence. Out of the total funds for R.D.T. & E. under your jurisdiction, how many dollars were expended for buildings and physical properties?

Secretary BRUCKER. The amount is minor in nature and we will have to supply the details for the record. I am sorry that I do not have them.

Mr. SHEPPARD. I can understand.

(The information requested follows:)

Of the total "Research, development, test, and evaluation" funds available to the Army for fiscal year 1960, $2,663,000 have been devoted to construction.

OPERATION AND MAINTENANCE FUNDS

Mr. SHEPPARD. In your discussion in your original presentation, and later on in response to Mr. Mahon, you placed considerable stress on your operation and maintenance funds. I think that I can understand your concern.

Last year, if I remember correctly, your operation and maintenance funds were about $3 billion-plus.

Secretary BRUCKER. Operation and Maintenance, Army, 1960, direct obligations, $3,069,852,000.

Mr. SHEPPARD. Were they all released to you?

Secretary BRUCKER. Not all have been released yet.

General TRAUB. As of January 15, 1960, $11.1 million have not been apportioned.

Mr. SHEPPARD. Out of the total amount of money that you have had released to you, what portion has gone for operation and what portion has gone for maintenance?

Secretary BRUCKER. We would have to supply that for the record.

(The requested information follows:)

"Operation and Maintenance, Army," is now presented in terms of relating support expenses to missions. The purpose is to identify support-type expense as part of the cost of the major operating activities in order to better control and reflect the full cost of Army missions. Under this concept the operation and maintenance of facilities cost included within this "Operation and Maintenance," appropriation for fiscal year 1960 is $1,153 million.

Mr. SHEPPARD. Mr. Secretary, or whoever can answer the question, if you had your option of expenditure in that field, which would you consider the most important expenditure—that of the operational requirements or that of the maintenance requirements? I ask that question based upon your comment about modernization, overhaul, and the bringing of your other appurtenances up to a state of readiness. That is what motivates the question.

Secretary BRUCKER. It is awfully hard to separate them. You have to operate before you can maintain.

Mr. SHEPPARD. That is a moot question. That goes back to the joker's idea about the egg and the chicken. You can buy a lot of devices, but if you do not keep them operational by maintenance, you are in trouble, are you not?

Secretary BRUCKER. That is right.

Mr. SHEPPARD. I say to you gentlemen, my personal thinking has been that the finest thing that could happen to the services would be to make each fund stand on its own feet—to separate the funds and not take from one fund to bolster the other.

Whenever you come to an operational problem, the easy thing to do is to reach over into the maintenance fund and yank it out and take the results later. If my conclusions are erroneous, you tell me so. You are not going to hurt my feelings at all.

Secretary BRUCKER. We would have to, on a case-by-case basis, see what occurred. I would not know in the overall how to answer you.

Mr. SHEPPARD. If I were in your position I would give the same answer. But I am sure it can be resolved. I have seen so many conditions where there is a backlog of obsolescence because we did not maintain. If we had this budget operation set up where each stood on its own, then the responsibility for those who were handling the budget would become more definite. Why? Because of the pronounced understanding that would be evident. As it is now, it is sort of a hypothetical thing where you hope you are right and trust everything will work out. That is not good, and you know that as well as I.

Now, here is something that I noticed out in California when I was on one of my inspection trips. I always reserve the right to talk about my own State because in doing that I am not hurting another Congressman's feelings.

Take, for example, the maintenance of installations for the mobilization reserve when their requirements are questionable under the modern concepts of war. A case in point is the Signal Corps facility at San Luis Obispo, Calif.

The 6th Army has recommended closing of this, but it has not been implemented. This facility is used for training linemen for mobilization. It is costly to maintain. Despite the desire to close it, the Army used maintenance funds to repair the roofs on buildings there.

Secretary BRUCKER. I do not know about that particular place. I would like to look into it.

Mr. SHEPPARD. Has anyone made a survey of it? The recommendation has been made over some period of time to close out. Obviously, some place in your shop someone is sitting on the lid.

Secretary BRUCKER. I will find out.

Mr. SHEPPARD. So far as you know at the moment there is no special requirement for that base, is that correct?

Secretary BRUCKER. I have your point.

(The following statement was submitted:)

Camp San Luis Obispo, Calif., a Signal Corps training installation was inactivated November 15, 1953. As an inactive installation it is a caretaking responsibility of Headquarters, Sixth U.S. Army. It is being retained primarily to meet mobilization requirements of the Southwest Signal Training Center. A Signal Corps school and a Signal unit training center are planned for mobilization

occupancy of the installation. Suitable training facilities for this purpose are available on the installation.

The installation is presently being maintained only to standards which will preclude unreasonable damage or deterioration to the buildings or facilities. The annual average cost for maintenance and management of facilities is about $260,000, including the costs to support reserve component units which use the installation for conduct of summer training. In addition The Adjutant General, State of California, uses and defrays maintenance on 35 buildings for National Guard activities and the Department of Corrections, State of California, uses and defrays maintenance on 103 buildings for a minimum security prison.

Mobilization plans of the Signal Corps will require full use of this installation to meet their training requirements in support of their mobilization mission. This requirement was illustrated during the Korean war when it became necessary to activate the station to meet the increased Signal Corps training load. As noted above, it was subsequently inactivated when the load decreased.

CONTRACT CHANGE ORDERS

Mr. SHEPPARD. I know that we are going to come to this issue later on, but with your permission, Mr. Chairman, I will go into it a bit now. It is with regard to the question that I asked the other day of another group and I am asking it now because of the assembled authority here.

I ran across this situation on the field inspection that I made and it is very evident. Due to the construction operations that we had, instead of having our plans definitized to the degree that I think they should be, we run into a lot of change orders. I am not going to belabor the point whether we should or should not have change orders at the moment. I am going to ask this question of you. About 60 percent of the settlement problems that emanate between the military and the contractors—and I am not confining this remark to the Army exclusively, by any means—arise from the fact that here comes a change in requirements. Obviously, there goes a change order. That order is not spelled out. It is not written out and 60 percent of the time it is verbal, so you come to a settlement with the contractor and the military is in trouble and the contractor is in trouble. How necessary is it to permit something of that character when it can be done in a written form? You get away from all the legal problems and the expensive difficulties. As it is now, it costs both the Government and the contractor plenty. Does that sound reasonably logical as a procedure?

Secretary BRUCKER. Yes, it does; it sounds logical. There is no reason why, if a person is willing to give an oral order he should not put that in a memorandum form.

Mr. SHEPPARD. It may appear to you like a minor thing but——

Secretary BRUCKER. It is the Government's dollars, I understand. It is another thing I will look into.

Mr. SHEPPARD. Thank you very much. I will not take up any more time.

(The following statement is submitted:)

The uniform clause used in Army contracts provides that the contracting officer may at any time, by a written order, and without notice to the sureties, make changes in the general scope of the contract, in any one of the following:

1. Drawings, designs, or specifications, where the supplies to be furnished are to be specially manufactured for the Government in accordance therewith;
2. method of shipment or packing; and,
3. place of delivery.

It is Department of the Army policy that change orders must be in writing. If the change order affects price or time of delivery, an equitable adjustment is incorporated in a modification to the contract. The change order clause in all Government contracts contains appropriate provisions for "equitable adjustments" resulting from change orders.

Violations of this policy are dealt with promptly and firmly.

DRAFT CALL

Mr. RILEY. Mr. Secretary and General Lemnitzer, I was gratified to learn from your original statement that you feel the Army today is better qualified to carry out its mission, that you are having more reenlistments, that you have a higher type of trained and technical man. I sincerely hope that that will continue.

In connection with that, do you have any forecast as to how many people you have to include in the draft for the next year?

Secretary BRUCKER. We can give you a rough idea on that. In the neighborhood of 102,000.

Mr. RILEY. That is 8,000 or 9,000 a month on the average?

Secretary BRUCKER. Right.

Mr. RILEY. I imagine that they are very carefully selected in connection with the criteria Congress has furnished you.

Secretary BRUCKER. That is correct. They are being screened at the present time, very carefully.

BUDGET REQUESTED OF OFFICE, SECRETARY OF DEFENSE

Mr. RILEY. We have asked each of the other services what their original request was of the Department of Defense, and I should like the Army to tell the committee what their original overall request was.

Secretary BRUCKER. With respect to money, troops, end strength?

Mr. RILEY. Money at the present time. Each of the other services has put that in the record.

Mr. MAHON. In answering the question I think that it would be well for you to give the type of information that the Navy gave. The Navy considered possible programs that ran up to $19 billion. They were not actually presented to the Secretary of Defense, but they were among the working papers, so we want the full background.

Mr. RILEY. It would not be amiss to have the full background, but I was more interested in what they actually had presented.

Mr. MAHON. The problem is, they were not permitted to request many of the things that they may have wanted.

Mr. RILEY. Let us get the full amount that the Army felt that it needed for the fiscal year 1961.

Secretary BRUCKER. First, I will say this, there were guidelines furnished to us the last week in June of 1959, that covered the matter. The same as last year with 10 percent of the procurement money, research and development and military construction deducted, and that is what was called the basic budget that we would submit. Then there was what was called an addendum budget that restored the 10 percent cut and added another $500 million to the total. We were to present those two budgets by September 1, 1959, and that we did.

In the meantime, with respect to the end strength, we were directed by written communication of July 29, 1959, to base our figures on 870,000 men for an end strength; 630,000 for the Reserve components made up of 360,000 from the National Guard and 270,000 from the USAR.

Mr. RILEY. Before you screened the requests from the different Army commands for the different categories, what was the amount the Army felt it needed for an adequate organization for 1961?

Secretary BRUCKER. You mean after we screened the field, because that is where the Army makes its appraisal, or objectives. We screen what the people send in to us from the field, the commanders.

Mr. RILEY. The Army's decision before you cut it down to the guidelines that are presented to you by the Department of Defense?

General LEMNITZER. In putting together a requirement as the Chairman has mentioned—and I think this is the way the Navy objective program was prepared—we prepare an objective program which is the result of our canvassing our field commanders all over the world and striking what we regard as the objective total which we would need for 1961. That total was about $13 billion.

Mr. FORD. New obligational authority?

General LEMNITZER. Direct obligations.

Mr. RILEY. Would you break that down for me between the different categories?

General LEMNITZER. I can give it to you in tabulated form.

Mr. RILEY. I would like to have it in tabulated form.

General LEMNITZER. I will provide a tabulation for you. The total amount is about $13 billion.

(The requested information is classified and will be submitted separately.)

Mr. RILEY. Under the guidelines given you you actually received what?

General LEMNITZER. About $10 billion.

Mr. RILEY. Were any of your requests declined by category, or cut down by the Bureau of the Budget?

General LEMNITZER. In our tabulation we will show you what was in our objective budget and what was in our fiscal year 1961 budget.

Mr. RILEY. Did you make any reclamas on any of it?

General LEMNITZER. It was not so much a matter of making a reclama. We did have full opportunity to present our program to the Department of Defense. It was a give-and-take discussion and process which lasted over a period of about 3 months.

Secretary BRUCKER. There were discussions that started in September, and on September 17 they culminated in a large and important meeting at the Secretary of Defense's Office. The budget had already been put in on the 1st day of September. The 17th is when we were given an opportunity to make our first presentation in respect to the overall position, and during September and October and November, and up to and including the first part of December, those discussions went on back and forth. We were presenting our position to the Department of Defense and they were ruling on it one by one.

ADEQUACY OF BUDGET

Mr. RILEY. I am concerned, and I think the other members of the committee are, as to whether or not any of these restrictions in your opinion are crippling to the Army from the standpoint of having it in a good prepared state. Were there any of these categories that were critical, in your opinion?

Secretary BRUCKER. During the course of these discussions we stated our opinion very frankly where those areas were. We objected. We did what we could to present it—General Lemnitzer, myself and others concerned. Yes, we did from time to time present it and we expressed ourselves pretty fully.

Mr. RILEY. My own personal opinion is that we are just as entitled to the thinking of the various heads of the services as the Department of Defense, or anyone else, because after all we pay the bill.

Is there any particular category where you feel that you were hurt by the final result?

Secretary BRUCKER. We felt the modernization of the Army should go forth faster. We so expressed it, and we requested all the money given to us by Congress as an add-on to the 1960 budget, that portion amounting to $382.6 million. We had exchanges on those subjects. We felt very strongly on the subject of modernization, particularly, and of course on the strength of the National Guard and the reserve components. There were some other elements, but those were the particular ones. You asked about the things about which we particularly objected.

MANPOWER REQUIREMENTS

Mr. RILEY. If the Army could have had its request they would have asked for an Army of 925,000 and a Reserve force of 700,000; is that what you would have asked for?

Secretary BRUCKER. That was the Army objective statement, exactly what you said.

MODERNIZATION OF THE ARMY

Mr. RILEY. We come to the modernization that you mentioned. That gives me and the others a great deal of concern, I am sure. If I understand these statements, it is going to take many years to even get the most elementary modern equipment for the Army. Am I correct in that?

Secretary BRUCKER. That is right.

We asked that it be accelerated because it will take from 3 to 7 years to get the basic items that I spoke about—the rifles, the machineguns, the tanks, and the armored carriers for the Army.

Mr. RILEY. And there will probably be a good many changes in the 3 to 7 years. Some may be obsolete before you would get them, or would they?

Secretary BRUCKER. Those were the basic weapons. We need them right off.

Mr. LAIRD. Do I understand those were things cut off from your modernization program?

Secretary BRUCKER. Those were things for which we requested a greater amount. We got some. We got some tanks, some machine-guns and rifles and some armored carriers, but we did not get the number that we desired in the 1961 budget.

Mr. LAIRD. Would you mind inserting the top priority of the items that you did not get?

Secretary BRUCKER. I will be glad to do that.

Mr. RILEY. I think that we should have it.

(The information requested is classified and will be furnished separately to the committee.)

Mr. RILEY. These basic weapons, it seems to me, should be provided with more acceleration than is going on at the present time. Are there any other requirements?

Secretary BRUCKER. General Lemnitzer has an example here, and I wonder if he will give it.

General LEMNITZER. Some of the areas where we would like to move faster in equipping the Active Army are as follows: the short-range surface-to-surface missiles, such as the LITTLE JOHN, the medium range SERGEANT missile and the PERSHING when it is developed, the surface-to-air missiles like RED EYE and HAWK. We are getting them, but it is a question of the rate. Also, self-propelled artillery, our new aluminum armor personnel carriers which the Secretary has mentioned, our fixed and rotary-wing aircraft, our new M–60 tank, and our new M–14 rifle. Those are examples of the type of equipment we would like to obtain at a faster rate. I would also like to add the latest communications equipment.

Mr. RILEY. Do you think then, General Lemnitzer, that covers the field of your concern about the modernization of the Army?

General LEMNITZER. Those were merely examples. The list covers literally all the new types of equipment which have come off our research and development program since 1952, most of which are now available for production—some of which are in production—and we would like to produce them faster so that we can get our Army equipped with the latest type of equipment at an earlier date.

ADDITIONAL FUNDS APPROPRIATED IN FISCAL YEAR 1960

Mr. RILEY. My recollection is, and I believe it has been stated, that this committee gave the Army some additional money last year. I am not sure whether or not it has been allocated.

Secretary BRUCKER. $382 million plus was appropriated by the Congress last year. We have gotten only $43 million in money from it for modernization.

Mr. RILEY. What became of the rest of the appropriation we gave for modernization?

Secretary BRUCKER. $164 million of that amount was absorbed by reason of the unrealized assets that had been debited against the Army, called deobligations and reimbursements. You remember the matter that we took up with you in which the Department of Defense said that it would amount to only $117 million that had been overstated as Army assets which had been debited. We contended to the committee at that time that it was $267 million. It finally came to rest at $164 million we were debited. We argued and argued against the Depart-

ment of Defense doing it. Instead of putting dollars in they put unrealized assets in and we could not get them, so $164 million of what you appropriated went for that. $175 million has been carried over into 1961, and when you add those two figures you get $43 million left which we asked for and have gotten for additional modernization.

Mr. RILEY. That is all that you have to spend in the fiscal year 1960 in direct obligations?

Secretary BRUCKER. That is what we have to spend this year in additional funds.

Mr. RILEY. That is the point that I want to make.

Mr. FORD. I suggest they put in tabular form what assets were not realized that were forecast to be available. Rather than putting it in story form, put in tabular form.

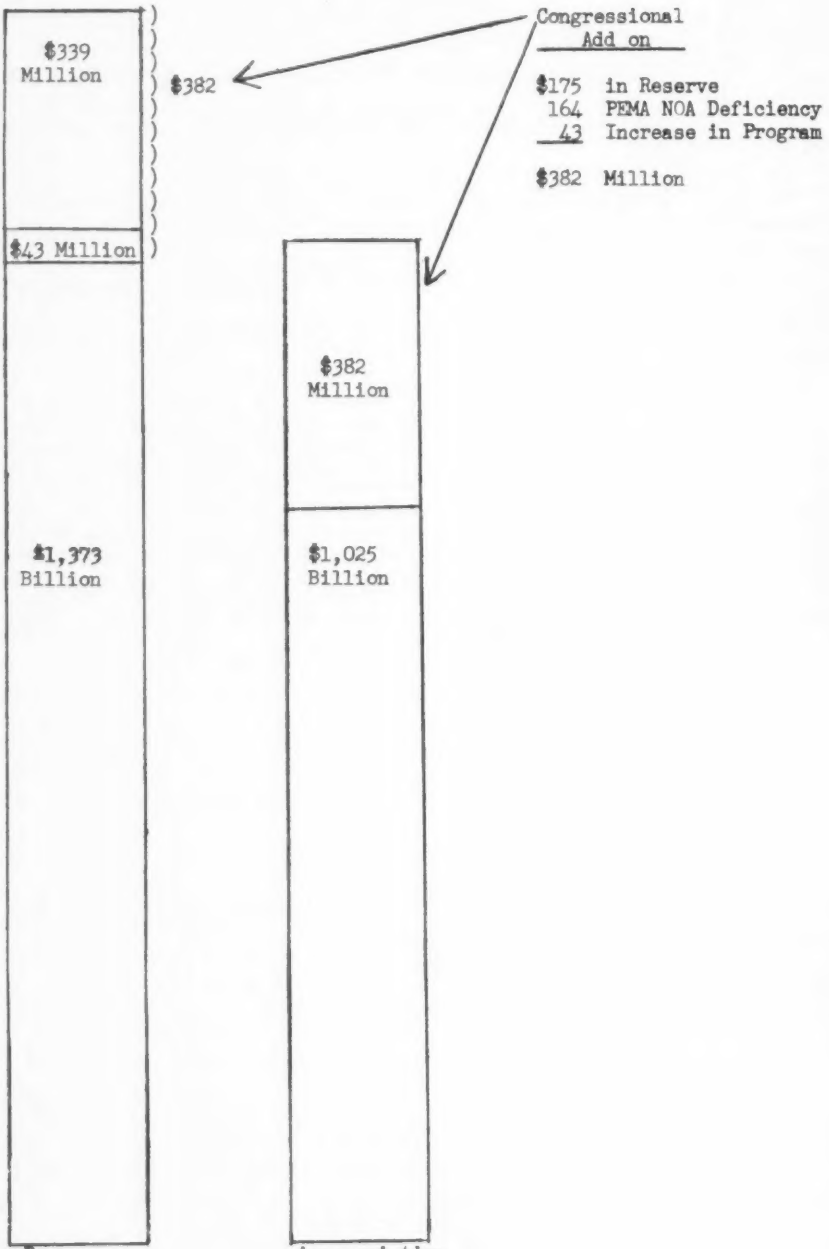
Secretary BRUCKER. We have both the story form and the graphic form right here.

Mr. RILEY. I think that we should know what the nonrealizable assets are.

(The requested information follows:)

The Congress in acting upon the fiscal year 1960 appropriation bill, appropriated $382.6 million more for Army procurement of equipment and missiles than had been recommended in the President's budget. However, the Army will only realize an actual increase over the President's budget of $43.4 million for the fiscal year. This is because higher authority has placed in reserve and will not release to the Army $175 million (of which $137 million represents NIKE-ZEUS) of the $382.6 and because $164.2 of the $382.6 million was required to cover a deficiency in the Army's procurement appropriation. This deficiency resulted from fiscal procedures imposed by higher authority which the Army has always opposed and which since have been rescinded as a result of the Army's continued insistence in the matter.

F.Y. 1960 APPROPRIATION
PROCUREMENT OF EQUIPMENT AND MISSILES, ARMY



DEFICIENCY IN FISCAL YEAR 1960 PEMA PROGRAM

Secretary BRUCKER. As a matter of fact, we told you last June when you asked us when Secretary McNeil came over, what was the difficulty with respect to this money. At that time the Army stated—and the three of us were here at that time, General Lemnitzer, General Traub, and myself—we said that the total amount of the deobligations and reimbursements, would be $267 million.

The matter has come to rest and I would like to read a statement here into the record.

Mr. MAHON. Let us insert it. It is late.

Secretary BRUCKER. All right; I will insert it in the record.

(The statement follows:)

1. The Army testified that a deficiency of $267 million would occur in financing the fiscal year 1960 PEMA program. This deficiency was based upon the following:

	Millions
Estimated fiscal year 1959 deobligations not expected to materialize	—$75
Estimated fiscal year 1960 deobligations not expected to materialize	—50
Military assistance program cancellations	—142
Total	—267

2. Currently this deficiency is estimated at 289 million as follows:

	Millions
Estimated fiscal year 1959 deobligations which did not materialize	—$56
Estimated fiscal year 1960 deobligations not expected to materialize	—50
Military assistance program cancellations	—183
Total	—289

3. Difference between Army and ASD estimates are in the following:

(*a*) *Fiscal year 1960 deobligations ($50 million).*

DOD position.—In September 1959, report to the committee, ASD stated it was too early to anticipate they would not materialize.

Army position.—As of this date, no deobligations have materialized and none are expected.

(*b*) *Military assistance cancellations ($142 million).*

ASD position.—In September 1959 report to the committee, ASD claims that the $142 million could be reduced to $42 million.

(1) Because $50 million of this amount was to result from stock sales, which, when not made, left the Army with $50 million of stock previously considered as lost.

(2) By applying $50 million of the fiscal year 1959 MAP program for items which would be issued from stock and not replaced in kind.

Army position.—Data to date indicates these cancellations now amount to $183 million. The Army has always been opposed to using customer's funds to finance direct obligational programs.

OPERATION AND MAINTENANCE

Mr. RILEY. You have stated that you have been very much concerned about operation and maintenance funds. I am concerned about what effect that has on the combat readiness of the Army. Would you discuss that for me or comment on it?

Secretary BRUCKER. Just exactly this: If our equipment is not maintained and is deadlined—whether it is tanks or whatever it is, automotive equipment, or anything else—instead of having that equipment operational, it is in a deadline condition in a depot somewhere with dozens and dozens of vehicles there which ought to be repaired and

in a position to back up the troops where it belongs. We feel that that is just an example or illustration of the maintenance backlog we have that runs into considerable money.

It is getting no better fast.

General LEMNITZER. I indicated the impact on our training in my statement, Mr. Riley.

DEADLINED EQUIPMENT

Mr. RILEY. I was looking at your statement.

Are you prepared to give this committee an accurate estimate or inventory of the deadlined equipment that is unused at the present time and which is repairable and could be used if you had the money to maintain it properly?

Secretary BRUCKER. We will get a statement and insert it at this point in the record.

Mr. RILEY. Only that which is repairable and usable if you had the funds to take care of it.

Secretary BRUCKER. All right.

(The information referred to follows:)

BACKLOG OF UNSERVICEABLE ECONOMICALLY REPAIRABLE EQUIPMENT

At the beginning of fiscal year 1960, reports from the field indicated the Army inventory included equipment valued at $1.2 billion which was repairable and could be used. With the funds provided for fiscal year 1960, it is estimated the backlog will not increase and may possibly decrease.

Mr. RILEY. Coming back to the airlift, I want to suggest only one thing in connection with that. The first 10 days in my opinion are going to be critical days in any emergency.

CLOSING OF POSTS

There is one other question I have asked both of the other services because I understand that there may be some curtailment of the various posts and bases.

What weight is given to the retention or closing of a post from the standpoint of efficiency and economy when you have posts of the same or similar missions?

I used this illustration with the Secretary of the Navy: If you were running an industrial establishment and had two plants, 100 miles apart, and one was making money and the other was not and you had to close one up, it would be a foregone conclusion which one you would close.

What weight do you give to the efficiency and economy of operation where you get the same results that you would get at some other location?

Secretary BRUCKER. Congressman Riley, when it comes to the closing of a facility or an installation or any portion of an operation in the Army, there is not any rule of thumb or any formula, or anything else you could use.

You have got to use staffing, the best word that you can get by information, and you have to use your best judgment and discretion at the top level.

The Secretary has to take the buck on what the discretion is that he uses.

Mr. RILEY. I am not sure that I agree with you on that. I agree with you in a good many things though.

Secretary BRUCKER. There are factors involved, if that is what you have in mind.

Mr. RILEY. In my opinion, you have to have a guiding criteria because what you say may have been true some years ago where you had to have posts to fight the Indians and things of that kind in certain locations, but the situation is decidedly different today with rapid transportation and communications and things of that kind.

In my opinion, every service—not necessarily the Army, and I have said it to the Navy and the Air Force—they can save money by giving more attention to the efficiency and economy of the operation.

Secretary BRUCKER. Congressman Riley, in addition to this, we prepare very detailed charts of every bit of the criteria involved in comparison between posts, camps, and stations, with regard to geography, with regard to transportation costs, and all of the minutia of it.

I was speaking about when you get the chips down at the end and somebody has to finally make that determination. There are, of course, a number of criteria used.

Mr. FLOOD. Including Members of Congress and the U. S. Senate.

Mr. RILEY. Off the record.

(Discussion off the record.)

Secretary BRUCKER. General Lemnitzer wants to amplify this.

General LEMNITZER. The Army staff, in making its study and advising the Secretary, considers a number of factors and I would like to read them to you.

Mr. RILEY. I think it ought to go into the record, if it is permissible.

Mr. MAHON. Yes.

General LEMNITZER. The factors considered include: effects on the local economy, labor surplus areas, dispersion, efficiency of operation, consolidation of effort at one facility to reduce overhead costs, capability of selected plans for expansion in an emergency, flexibility and production capability, retention of skills and know-how and the personnel involved, availability of raw materials, and other factors.

Those are the kinds of things.

Mr. RILEY. That is the type of information I wanted.

Thank you very much.

Mr. MAHON. Mr. Sikes has requested we develop for the record at this point certain information, and here are the questions, General Traub.

AIRLIFT

Mr. SIKES. What are the Army's requirements for strategic airlift—for tactical airlift?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. How many aircraft and what types are preallocated by the Air Force to meet the Army's strategic and tactical airlift requirements for general war—for limited war?

General LEMNITZER. The Air Force has not preallocated aircraft to meet the Army's strategic and tactical requirements in either a general or limited war.

Mr. SIKES. Are you satisfied with the plan to furnish airlift from CRAF? If not, please outline your reservations and objections?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. What type aircraft does the Army desire for its tactical airlift requirements and in what numbers—for strategic airlift?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. In view of the fact that the Air Force is not capable of meeting the Army's requirements for tactical airlift, what is the Army doing on its own to fill the gap? What are the factors which preclude the Army from fulfilling its requirements within its own means?

General LEMNITZER. Under the provisions of Department of Defense Directive, 5160.22, the Army airlift effort is restricted to the combat zone. The function of airlift within the combat zone includes the movement of units to execute small-scale air-land operations, the movement of reserves, and the shifting or relocation of units or individuals within the combat zone as the situation may dictate. It does not, however, include the execution of joint airborne operations. There are tremendous possibilities in the use of aircraft to increase substantially the mobility of ground troops, not only in the rear areas but in the area of contact with the enemy. This type of mobility is essential in modern warfare, either nuclear or nonnuclear, and current Army planning envisions 42 aviation companies for this purpose by the end of fiscal year 1965.

Two new aircraft are being programed which give the Army greater capability in this function. A new medium helicopter, the CHINOOK, is a twin-turbine helicopter, able to transport 2 to 3 tons; it has a rear-ramp door to facilitate loading.

The CARIBOU AC–1 is a new twin-engine light transport airplane, capable of operating out of a very short field with a three ton load, or carrying up to 32 troops. Like the CHINOOK, the CARIBOU has a large rear-ramp door to enable missiles and other cargo to be easily loaded.

These two new aircraft complement each other and offer the Army extended versatility to perform many of its vital missions. To explore future possibilities in tactical air mobility, the Army has put a special study requirement to industry asking for design concepts that may offer additional capability in this area. These concepts will be reviewed this spring.

Thus, the Army is moving to fill part of the gap in its airlift requirement where authorized, but it is expressly forbidden to program for airlift beyond the combat zone, and must receive DOD exception for any fixed-wing aircraft (such as the CARIBOU) with an empty weight in excess of 5,000 pounds.

Despite the fact that two exceptions to the weight restrictions have been authorized by DOD, these limitations have inhibited efforts in research and development. Any arbitrary definition of the "combat zone" which restricts the operation and employment of equipment is objectionable in principle.

Mr. SIKES. What are the Army's requirements for tactical air support?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. Are you satisfied that the current and planned tactical air support aircraft can fulfill the Army's requirements? If not, what are the major deficiencies and what do you recommend be done to overcome these deficiencies?

General LEMNITZER. The tactical reconnaissance aircraft and the tactical fighters which the Air Force uses or plans to use in support of Army forces are expensive and sophisticated aircraft which operate from complex, fixed bases with long runways. The characteristics of the fighter aircraft indicate that they have been designed primarily for air defense, offensive counterair, and interdiction missions, all of which will be performed at the expense of the close support mission.

The Army recommends the development of an inexpensive tactical fighter capable of operating off semi-improved fields. This aircraft should be specifically designed for accomplishment of the close support mission. By removing its ordnance and installing camera equipment this same aircraft can be used in the tactical reconnaissance and observation role.

DEFICIENCY IN FISCAL YEARS 1959 AND 1960 DEOBLIGATIONS

Mr. SIKES. Last year the Army anticipated a $267 million deficiency in 1959 and 1960 deobligations and from MAP reimbursements. OSD estimate $117 million. What was the actual deficiency and what are the effects on Army funding, i.e., money available to the Army for modernization? This committee stated in its report that the additional money appropriated for modernization

would not be used to make up this funding deficiency. It appears to me, from previous discussions, that OSD or BOB has used the funds for this purpose.

Secretary BRUCKER. The Army calculates the actual deficiency as $289 million. In order to overcome this deficiency, the Army's planned obligational program for fiscal year 1959 was reduced $125 million. Of the $383 million added by Congress in fiscal year 1960, $164 million was also utilized to overcome this deficiency.

PROCUREMENT OF 7.62 WEAPONS

Mr. SIKES. At the present rate of procurement, in what fiscal year will the Army be completely equipped with the new family of 7.62 weapons?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. In what fiscal year will the Reserve components be completely equipped with these weapons?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. In what fiscal year will there be an adequate mobilization reserve of these weapons?

General LEMNITZER. The information is classified and I will supply it separately.

M–60 TANK

Mr. SIKES. At the present rate of procurement, in what fiscal year will the Army be fully equipped with the new M–60 tank?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. What are its characteristics which are superior to those of other tanks now in inventory?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. In what fiscal year will the Reserve components be equipped with the M–60 tank?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. In what fiscal year will there be an adequate mobilization at the present rate of procurement?

General LEMNITZER. The information is classified and I will supply it separately.

HONEST JOHN

Mr. SIKES. Why is there a cutback in the number of HONEST JOHN rocket battalions? It appears to me if we are to modernize the Army, we should be expanding rather than reducing the number of units equipped with modern weapons: Will you comment on that?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. The Marine Corps has told this committee that it is no longer interested in using the LITTLE JOHN rockets because of their lack of accuracy when equipped with conventional warheads. Does the Army propose to continue the use of LITTLE JOHN rockets and, if so, why?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. The Marine Corps has also stated that the LACROSSE missile does not meet its requirements because of problems which have been discovered in the electronics system. Does the Army view these problems with concern and, if so, does the Army plan to drop the weapon or to correct the deficiencies?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. What are the characteristics of the French and West Germany weapons which the Army is testing? Do they appear superior to our own?

General LEMNITZER. The information is classified and I will supply it separately.

SOVIET ARMY

Mr. SIKES. Mr. Khrushchev has stated that the Russians will reduce their army very significantly—in fact, by about 1,200,000 men. However, this would leave 2,400,000 under arms. I would like to ascertain from you something about

the character of the forces remaining should the Russians actually go through with this reduction in personnel.

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. First, is it true that the Russians will still have in uniform a force significantly larger than our own?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. Is it true that the Russian armies have been completely equipped with new postwar modern weapons and equipment whereas most of our forces still are equipped with modernized but not new weapons and equipment?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. Is it your opinion that the Russian forces will simply be a little closer to the level of our own forces, but they still will outnumber us and that their equipment will be newer and more modern than ours?

General LEMNITZER. The information is classified and I will supply it separately.

M–14 RIFLE

Mr. SIKES. A statement has been advanced by an editor of one of the leading firearm publications in this country that the new M–14 rifle be made available to the public by the manufacturer. Would the Department of the Army and, insofar as you know, would the Department of Defense object to such a procedure? Please give your answer in some detail.

General LEMNITZER. The Department of the Army considers that it would be inadvisable to authorize the release of the new M–14 rifle for sale to the general public at this time. Reasons are as follows:

(*a*) The Secretary of the Treasury has determined that the M–14 rifle is an automatic weapon within the meaning of the National Firearms Act. Consequently, its sale to the public would unduly burden the law enforcement efforts of the FBI, the Treasury Department, State, and local authorities. The mass sale of such a weapon would seriously impede the efforts of the Department of State to suppress the illicit international traffic in arms.

(*b*) In the absence of specific legislation to the contrary, the Department of the Army is obligated to insure that a military item of this type is properly controlled so as to prevent its sale, distribution, or use in a manner that would be inconsistent with the national interest.

(*c*) To the Army's knowledge, the Department of Defense has not expressed an opinion on this subject, but in view of the Secretary of the Treasury determination, it is believed that Department of Defense would also consider such sales inconsistent with the national interest at this time.

Mr. SIKES. I have noted some increase in the budget for CBR activities and I consider this highly desirable. I am sure you in the Department of the Army are familiar with the emphasis which is placed on CBR by the Russians. Is it true that we still have far to go in this country before we have an actual readiness either for defense or offense in this important field?

General LEMNITZER. The information is classified and I will supply it separately.

Mr. SIKES. Is this not one of the areas where we would be in greatest danger from a surprise attack?

General LEMNITZER. The information is classified and I will supply it separately.

Thank you very much, gentlemen. It has been very helpful to have you.

We shall adjourn until 10 o'clock tomorrow morning.

FRIDAY, JANUARY 29, 1960.

Mr. MAHON. We shall resume our hearings on the Army budget. Mr. Andrews.

ADEQUACY OF THE BUDGET

Mr. ANDREWS. Mr. Secretary, I have the opinion from listening to your testimony that you are not satisfied with this budget so far as

the Army is concerned, but you will do the best you can with what you have?

Secretary BRUCKER. We will do the best we can with what we have. I have given you the areas of the need for modernization of the equipment, and we are going to go along the best we can.

As to modernization, this is not the first time the Congress has endeavored to give the Army consideration with regard to it. In 3 previous years the same thing happened and we have had similar results. But we are going right along because eventually the need for acceleration will be recognized and we will get it. I am sure of it because it is the right thing to do.

RUSSIAN VERSUS UNITED STATES ARMY GROUND EQUIPMENT

Mr. ANDREWS. Is it your opinion that the Russian Army today has more modern weapons than our Army?

Secretary BRUCKER. I think it is very obvious that the Russians have more modern equipment than we have for our Army. I do not, of course, want to make a public statement with respect to comparing the two because there is a certain objection due to security classification on the rate of acceleration. I would rather keep them guessing as to what our rate is. I can answer your question directly that there is more modernization in the Russian Army for the ground forces.

RED CHINESE WEAPONS

Mr. ANDREWS. You stated China was like a crouching tiger ready to spring on any prey that is weak and wounded.

Secretary BRUCKER. That is right.

Mr. ANDREWS. Do you know anything about the kind of weapons the Chinese have?

Secretary BRUCKER. They are arming and Russia has given them some modern equipment. How much, I do not know. I do know that we have found in different places, such as Laos, there is some equipment that is very patently Russian equipment. It has been furnished to the Red Chinese in the invasion from North Vietnam into Laos.

Mr. ANDREWS. Did you visit Laos?

Secretary BRUCKER. No, I did not visit Laos.

Mr. ANDREWS. Do you know whether or not the Chinese have any atomic weapons?

Secretary BRUCKER. I do not know. I do not believe they have them at the present time.

ARMY NATIONAL GUARD

Mr. ANDREWS. This budget contains a request for only enough money to keep the National Guard at a strength of 360,000 officers and men.

Secretary BRUCKER. That is right.

Mr. ANDREWS. In your statement you indicated the guard was in excellent condition today, high morale and all that.

Secretary BRUCKER. Right.

Mr. ANDREWS. What effect do you think the cut will have on the morale of the guard and the position of the guard?

Secretary BRUCKER. Here is the situation in a nutshell: You will remember that the Guard was completely reorganized under the Pentomic concept just about a year ago, or a year and a half ago. That concept streamlines every one of the guard divisions and assigns a mission and role with respect to its relationship to the Active Army, and the Guard is being trained on that basis.

If we have to cut it 10 percent we will have only one of three choices, either to cut out whole units of the guard ranging all the way from a company, battalion, or combat group to a regiment, or even a division, or else take out individuals and that slenderizes a unit but keeps the unit's integrity. But with a slenderized number it is very hazardous and costly because to have a few in a unit without having the whole unit strength reduces its efficiency and keeps the cost at about the same. The third alternative would be to combine the two methods and eliminate both units and individuals. We have not gotten to the place yet where we can say which one of these alternatives we will have to follow. That would be the effect of it as far as the Army is concerned. It would, coming so soon after the reorganization, constitute a very violent change.

Mr. ANDREWS. Did you recommend the cut, or did it come from above?

Secretary BRUCKER. It was not initiated by the Army.

Mr. ANDREWS. I assume the Army is unhappy with the full cut?

Secretary BRUCKER. The Army recommended the full 400,000 for the National Guard. We told the Secretary of Defense repeatedly we felt this is perhaps as competent an organization as could be had today to augment and supplement the Active Army forces of 870,000, which in themselves are marginal, as you know.

COMPARISON OF COSTS, GUARDSMEN AND REGULAR ARMY

Mr. ANDREWS. I have always felt that we got as much, if not more, for the money spent for the guard than any other branch of the service. Several years ago they placed some figures in the record showing they could keep up 7.8 guardsmen for the cost of one Regular Army soldier. I wish that you would check the record to see what that ratio would be today.

(The matter referred to follows:)

Comparison of per capita costs of Army National Guard and Active Army based on data in President's budget requests

ARMY NATIONAL GUARD

	Fiscal year 1960
Average strength	400,000
National Guard personnel, Army	$191,961,000
O. & M., Army National Guard	146,000,000
Total	337,961,000
Guard per capita cost	$844.90

ACTIVE ARMY

Average strength [1]	867,900
Military personnel, Army [1]	$3,280,662,000
O. & M., Army [2]	2,159,335,000
Total	5,439,997,000
Active Army per capita cost [3]	$6,268.00
Ratio guard to Active Army	7.4:1

[1] Excludes USMA cadets and their pay.
[2] Excludes certain nonoperating costs, such as mobilization reserve and major procurement.
[3] Includes Active Army support of Army National Guard paid from Active Army appropriations such as specialist training and maintenance of equipment.

Secretary BRUCKER. I would be glad to do it, but let me say this. We have adopted what we call the One Army concept, Mr. Andrews, by which we are endeavoring to meld, or pull together, all the elements of the Army in an honest and sincere plan to get together in peace that which we would certainly have to have together in time of war. It is all for one and one for all. We frankly do not like to emphasize any differences between the two. We think the mission of the Active Army and the Guard and the Reserve all fit together, and without respect to whether one is paid less, or drills more, or whatever it is, each of them has a function that the other cannot perform and they are all together in this one concept. I think you would be surprised to see how that leadership has responded, the leadership of all the services, in this thing together. I feel the Active Army recognizes—and I have been in all three—the mission of each of the other two, and each of the other two recognizes the mission of the Active Army. You have to have all three, in other words. That is why we recommended all three be retained at this strength.

Mr. ANDREWS. When do you plan to start making the reduction, and how do you plan to go about it, Mr. Secretary?

Secretary BRUCKER. Well, we are going to have to start staffing this very quickly to study it. We have already started the staffing as far as that is concerned to study it. It will have to be a phasing movement so that it will not be too violent. We will have to take it out following the 1st of July, but in order to have a manpower chart made of the matter and have it done in a regular and scheduled way, we will have to start it this spring. We will have to start the augmenting of the plan and putting it into operation some time this spring so about July 1 we will have the plan ready for operation.

Mr. ANDREWS. Do you plan to make the full reduction during the fiscal year 1961?

Secretary BRUCKER. That is right.

Mr. ANDREWS. And have the strength down to 360,000?

Secretary BRUCKER. That is right.

Mr. ANDREWS. Officers and men by the 1st of July 1961?

Secretary BRUCKER. That is right. It goes from 400,000 down to 360,000.

Mr. ANDREWS. Will you lose any divisions?

Secretary BRUCKER. I am not sure we will have to lose some. At first blush we do.

Mr. ANDREWS. How many National Guard divisions do you have today?

Secretary BRUCKER. Twenty-seven. Previously we figured if the cut went through—and this was 2 years ago and it looked at that time that it was really going through—we would come out with 21 divisions. In other words, we would take 6 out. That is the basis on which we went on the mat with both the Guard and the Governors of the States and the rest, and we came out with this decision—we would keep the 27 divisions and go along on that basis, and on that basis the 400,000 was granted by the Congress. We are back at the place where the question will be whether to take out some divisions or not. I would not want to upset the applecart by making any statement that we would take them out, or might take them out.

Mr. ANDREWS. Year before last the committee put mandatory language in the bill.

Secretary BRUCKER. They did.

Mr. ANDREWS. Prohibiting the reduction of the Guard, and this fiscal year that language was eliminated because of an agreement that the guard would not be cut during this fiscal year.

Secretary BRUCKER. No. You put the language in with regard to the National Guard, but you did not put the language in with regard to the USAR, the 300,000.

Mr. ANDREWS. The Reserves?

Secretary BRUCKER. But you expressed very clearly the desire that they be treated equally, and when we went to the Department of Defense and urged them to retain them, the strength was finally kept at 300,000 for the Reserves and 400,000 for the Guard.

COST OF MAINTAINING EXISTING STRENGTH FOR RESERVE COMPONENTS

Mr. ANDREWS. We have been told that the additional cost of retaining the guard at the present level, and the Reserve, is $72 million. I wish that you would check that and if it is not correct put the figures in the record which in your opinion would be correct.

Secretary BRUCKER. I have here a schedule of this, what the cost would be. The figure is not $72 million; the figure is $125.4 million broken down as follows:

Reserve Personnel, Army, $35,000,000; National Guard Personnel, Army, $31,700,000; Operations and Maintenance, Army National Guard, $200,000; Operation and Maintenance, Army, $38,500,000; Procurement of Equipment and Missiles, Army, $20,000,000. That makes a total of $125,400,000.

Included in this amount are sums needed to restore program balance at the 630,000-strength level. The $104 million, the estimate pre-

viously in general use for this purpose, antedated the imbalance created by the OSD markup of October 1959. The $125.4 million above restores the balance and provides for the strength maintenance at 700,000.

The Army National Guard would be a proportion of that, I suppose, as 4 is to 3—400,000 to 300,000.

Mr. ANDREWS. Was this question of the reduction of the Guard discussed before the Joint Chiefs?

General LEMNITZER. We have discussed this matter with the Reserve forces and with all services in the Joint Chiefs of Staff at various times. As a matter of fact, we are currently underway on a study to determine the requirements of the Reserve forces in the Army, the Navy, the Air Force, and the Marine Corps. We have discussed it, but not specifically with regard to the question of this reduction.

Mr. ANDREWS. How did you feel about the reduction, or proposed reduction, of the guard forces?

General LEMNITZER. As the Secretary has indicated, we recommended the 700,000 program—300,000 in the USAR, and 400,000 in the National Guard.

Mr. ANDREWS. So, Mr. Secretary, unless this committee adds $125 million with mandatory language for the retention of the guard strength at 400,000 officers and men, and the Reserve strength at 300,000 officers and men, the guard and the Reserve forces will be cut during the fiscal year 1961?

Secretary BRUCKER. That is right, unless something is done about it. As of now we will go right ahead with the 10 percent cut to 630,000 for the two on the basis of that being the direction in the budget.

BASIS FOR DEVELOPING BUDGET

Mr. ANDREWS. Your budget request before this committee this year does not seem too much greater than it was last year.

Secretary BRUCKER. You mean the objective budget, or the amount in the budget that you have before you, sir?

Mr. ANDREWS. The amount that we have in here for new obligational authority.

Secretary BRUCKER. It is just about the same mark it was last year. In other words, we were directed to start with the figure we had last year for this year's budget, and take the 10 percent out of the three items that I spoke about yesterday, "Military Construction," "Research and Development," and "Procurement," and make our presentation to get that figure. There was a second, or addendum budget, we presented that restored the 10-percent cut and also included an increase of $500,000,000. So there was the A budget and the B budget—the basic budget and the addendum budget. We did not get quite back to the place we were last year, but just about the place we started.

Mr. ANDREWS. What was the original budget request that the Army submitted to the Secretary of Defense?

Secretary BRUCKER. The basic budget was $9,549,205,000, and to the basic budget was added $771,000,000, making a total for the basic and addendum budgets of $10,320,205,000. That was the submission.

Mr. ANDREWS. And against that you got what?

Secretary BRUCKER. $9,546,000,000, plus a transfer allowance of $260,000,000, making a total of $9,806,000,000 in new obligational authority. The transfer is from the stock fund to reduce the requirement of NOA.

Mr. ANDREWS. On page 25 you stated:

In support of all these requirements to maintain the Army in a high state of combat readiness, the fiscal year 1961 budget totals approximately $10.008 billion in direct obligations.

General TRAUB. That is correct.

Mr. ANDREWS. (reading):

This amount compares with the $9.966 billion received in the fiscal year 1960.

General TRAUB. That is correct.

Mr. ANDREWS. Which is only an increase of $42 million.

Secretary BRUCKER. That is right.

Mr. ANDREWS (reading):

To finance this fiscal year 1961 program, and prior years obligations, estimated expenditures will be $9.383 billion as compared with $9.349 billion in the fiscal year 1960, and $9.468 billion in the fiscal year 1959.

What part do you think inflation will play in your program in 1961?

Secretary BRUCKER. That is hard to say.

Mr. ANDREWS. The Navy told us they expected about 7 percent.

Secretary BRUCKER. We have been talking 3 percent a year.

Mr. ANDREWS. You think that you will have about 3 percent increase over last year's expenditures due to inflation?

Secretary BRUCKER. That is right.

Mr. ANDREWS. I do not know whether this would be in order or not, but in conclusion I want to say to you that one of the witnesses told us that he was satisfied with the size of this defense budget pie, but not the way it was cut up. Do you feel about the same way?

Secretary BRUCKER. We feel, of course, and have said so previously, that it is not the size of the overall, but we just feel that there is not allocated to the Army, in recognition of the limited war requirement and the other things we have to do, a sufficient amount to keep us modern and to do the job. I will be frank about it—that is the way it is.

Mr. ANDREWS. I agree with that, and I think that you have done a very good job with what you have had to work with. That is all.

Mr. MAHON. Mr. Flood.

REALITY OF MILITARY POWER AND PUBLIC IMAGE OF POWER

Mr. FLOOD. Mr. Secretary, I have made this same preliminary statement to all the other people who have been here from the other branches. It is a concept of the existence of the reality of power as contrasted to the public image of the existence of that power. I have been using exactly that terminology deliberately. My thesis is one without the other makes your performance incomplete. I am laboring under the impression that the Department of Defense is concerned, and exhibits its concern, to such an extent with the first part of the premise that they have forgotten entirely the equal significance of the second part, the first part being the reality of power. Right or wrong, they are concerned with that. Whether it exists as a fact or

not, they are not concerned. They are losing track entirely of the equally significant element that whether or not there is a reality of power there must be a public image of that power or it does not have value even though the facts are true.

The public must have an image of those facts, and if the public image is wrong in its own mind then the value of the existence of the physical power is of considerably less importance, whether it exists or not.

That is a very difficult premise. There are two horns on that dilemma, and there is no doubt in my mind that there is a total ignorance of the second one. The public image is not in this country, or any place else in the world; the public image of this physical power does not exist. The public does not believe it. That is serious, I think all over the world.

I made this Far Eastern merry-go-round like you, but I got into Laos, Thailand, Cambodia, South Vietnam, and up into the jungle area and up into the border areas.

Now, Mr. Secretary, that is all army country. That is not generally known in this part of the world as the Pentagon, but every country I went into over there, their military concept is—this is army country, ground troops, army warfare. Their interest in the navy and the air force is very limited, extremely limited.

A lot of those troops look mighty good. I was up in the training areas with the Thai jungle troops. I never saw better looking jungle troops. They looked very good. The same thing of the South Vietnamese, they look awfully good in the line, their infantry and their artillery battalions and this training school looked first class.

But all of those troops and all of those countries in southeast Asia at their very best cannot fight any kind of war unless we go in there. There is not a square inch in southeast Asia that can be held if there is a major move against it, not for more than a reasonable period of time.

Laos is barely even money politically. They know that.

Now I am not in the habit of tossing bouquets around these tables. I do not hold with these compliments to you fellows when you come up here about what a great contribution your statements have made, and how wonderful your testimony is and we are glad you are helping us out, and all that. I do not think that we should say that. Even though I think it is right sometimes, I still do not think on this side of the table everybody in all these committees should knock themselves out telling you jokers how wonderful you are, because I think that is wrong, because you know better. If we tell you that you are liable to think that we are crazy. You know it is not true, altogether that is. It makes us look bad.

LACK OF ADEQUATE AIRLIFT

But I want to say this, and I am not going to belabor it, the statement you made on airlift, or the lack of it, and the contribution by General Lemnitzer, forces me to break my rule. Under all the circumstances, and I know them, that was a strong and courageous statement. It took a lot of guts to make it. You are flying in the face of the gods around here, and you have been here a long time and you know what that means. They nearly took you a couple of times for

making strong statements. That was a strong statement. I consider the airlift problem, and I have been belaboring the point from this chair for many years, deadly seriously—for lack of it. I do not think the Joint Chiefs of Staff, and I do not think the Department of Defense and all of the secretaries and admirals and generals who have been coming up here have been fair with us, have been telling us all the truth, and I have been resenting it almost to the point of wanting to charge them with conspiracy to keep from us the true facts on airlift. We do not have it. We have never had it.

Now I believe today, as the result of your statement, and General Lemnitzer's statement, and from the way the chairman pinned it down, we have this boil on the back of our necks right to where it is going to burst. I hope we lance it here in the next couple of months and expose this for the sham it is, and has been—this lack of airlift. The Secretary of Defense has been woefully derelict in not meeting this problem. The Air Force people have been pushing it under the rug for good or bad reasons, but that is the fact. It is the Achilles heel of this whole show, deadly so. Thank God I hope and pray we are going to meet this problem, really meet it this time, instead of having these 10, 20, 30 road shows that have been performed here as special hearings on airlift.

Now, I like this General Magruder in Korea. He is one of my favorite characters, a tough old character. I spent some time with the 1st Cavalry and 7th Infantry division.

USE OF KOREAN TROOPS

Now, I am notoriously upset, almost emotionally, about this KATUSA business. I think it is the sorriest blot upon the escutcheon of American military history that I ever heard. I think it is an outrage that two great divisions, the 1st Cavalry and the 7th Infantry, are 40 percent Koreans down to the rifle squadrons, down to the platoon level. I never thought that I would live to see the day when I was a kid watching the Fourth of July parade when that would happen.

Now, I go over to Korea and you know the story. I go up in the line with the 34th and I watch them in the field and ask them to deploy, so I see a platoon. And there is the platoon. I separate them and I find 40 percent, not 25 percent, Koreans.

Now, I have made it abundantly clear I am not criticizing those troops. I watched them. I spent some time with the 6th ROK. They looked good. The Koreans, the soldiers, the boys serving with our 1st Cavalry and 7th Infantry, look good, no squawk. In many instances they looked just as good as ours right alongside of them, but that is not the problem.

I am for training Koreans. I will do anything you want to train the Koreans. I am for giving them all the hardware, or anything you want to give them to train them. They have 18 Army divisions. They have 1 Marine division. Our Marines tell me they are good. Some of their infantry divisions are good and some are not so good.

These are good, brave troops, so this is no aspersion upon the Koreans. They will fight and die in this thing. I am not sure about a lot of other people, but the Koreans will. So my hat is off to them. But what in God's name do you want them in your two great divisions for? Why do you not get them out of there? Do not tell me you are

going to train them and you need them. If you need liaison troops, if you need scouts and so forth, give those to the division commanders, as many as they want. But that has nothing to do with the divisions, Mr. Secretary. Make those American divisions, American officers and men. They do not belong there the way they are. It is an outrage.

General LEMNITZER. I would like to answer that one.

Mr. FLOOD. Go ahead.

General LEMNITZER. We would like to have our two divisions in Korea manned 100 percent with Americans. The use of KATUSA is a part of the problem of the total manpower resources being made available to the Army.

Mr. FLOOD. Made available by whom?

General LEMNITZER. The budget, and by the personnel ceilings under which we operate. We are operating now with 870,000 total strength in the Active Army. We have certain missions——

Mr. FLOOD. You are saying to me the only reason those KATUSA's are in the 1st Cavalry and 7th Infantry Divisions is because you do not have money enough to put American troops in there. You want them in there. All the officers in there want them in there. We cannot have them in there because we cannot afford it.

General LEMNITZER. Because we do not have enough Americans to go all the way around to do all the jobs assigned to us.

Mr. FLOOD. Why not?

General LEMNITZER. I think that that is pretty obvious to you.

Mr. FLOOD. Because the budget will not allow it?

General LEMNITZER. Because we are not authorized any more than 870,000 in the Active Army.

Mr. FLOOD. And it is because of money. It is because of the budget. You are hiring mercenaries because you cannot afford to put your own people in there, is not that it?

General LEMNITZER. It is not only the budget, it is manpower limitations.

Mr. FLOOD. But the manpower limitations are conditioned upon the budget?

General LEMNITZER. I am telling you that our limitations are in both manpower and money.

Mr. FLOOD. You have had imposed upon you by superior authority a manpower ceiling and a dollar ceiling?

General LEMNITZER. That is correct.

Mr. FLOOD. And the reason that you cannot make the 1st Cavalry and the 7th Infantry two U.S. combat divisions officers and men of the U.S. Army, is because of the ceiling imposed upon you, is that not right?

General LEMNITZER. That is correct.

Mr. FLOOD. You would want them all Americans, officers and men?

General LEMNITZER. Yes, but that would not remove the desirability of having the KATUSA's serve with those two divisions. I hope you will not use the word "mercenary." It definitely does not apply to them.

Mr. FLOOD. I withdraw the word "mercenary." It is a bad word.

General LEMNITZER. Yes. It does not apply to them in any respect.

Mr. FLOOD. I think that is probably right. It is a bad word and improperly used. Mercenary is not what I meant, but what I do

mean how much are you paying the Koreans a month. What does that Korean rifleman alongside my rifleman get per month?

General LEMNITZER. He is being paid by the Korean Government.

Mr. FLOOD. How much in dollars?

General LEMNITZER. A very, very small amount.

Mr. FLOOD. About $7 or $8 a month?

General LEMNITZER. Yes, and in most cases less than that.

Mr. FLOOD. Anywhere between $5 and $7 a month is what the Korean KATUSA is getting, alongside an American soldier who is getting what on the average per month?

General LEMNITZER. It varies. I do not know what the average is.

Mr. FLOOD. It is quite a spread regardless of the dollars?

General LEMNITZER. We pay for certain things to assist them—PX supplies and movie entertainment, so as to minimize the differential.

Mr. FLOOD. Has this ever been done in American history before under analogous circumstances?

General LEMNITZER. It was done in the Korean war.

Mr. FLOOD. I mean outside of Korea has this ever been done in any American infantry division in the history of the U.S. Army?

General LEMNITZER. I think that we have had nationals of other countries working with us in U.S. divisions in the past.

Mr. FLOOD. You know exactly what I mean. Never in the history of the U.S. Army, outside of brigading units, or liaison people, or special service forces, has this been done. That is all right, I am for that, but never as far as I know—and I would like to be corrected if I am wrong—have we had in the Army of the United States an infantry division made up of 40 percent or 25 percent of other nationals, have we?

General LEMNITZER. Well, now, with regard to the 40 percent, the answer to your question is no.

Mr. FLOOD. Make it 25 percent, I do not care.

General LEMNITZER. I know that, but you saw some units in which you stated that the KATUSA strength was 40 percent. That is not a normal across-the-board strength of KATUSA in those divisions.

Mr. FLOOD. The normal is 28 percent?

General LEMNITZER. It is not supposed to be over 25 percent.

Mr. FLOOD. It is over 25 percent.

General LEMNITZER. It was when you were there, but I am not sure it is now, and it is not going to be over that.

Mr. FLOOD. Let us settle for 25 percent.

General LEMNITZER. It is not going to be over 25 percent.

Mr. FLOOD. Whether it is 25 or 50 percent does not affect my premise.

General LEMNITZER. I know that.

Mr. FLOOD. I am not against these people, I am their friend.

General LEMNITZER. I realize that.

Mr. FLOOD. Do not do that to American divisions.

General LEMNITZER. Well, as one of the alternatives, you said to take our divisions out of there. That would be a disaster, in my opinion.

Mr. FLOOD. I agree with that. I am trying to force somebody's hand. I do not want them pulled out of there. You know that I would be the last man in Washington that would want to pull the two divisions out of there. You know what I mean. I say that a fiscal limitation has been imposed upon you, that contrary to the best judg-

ment of the officers in the field, contrary to your best judgment and the best judgment of everybody here in town you are prevented by the Bureau of the Budget and by fiscal gymnastics, and by whatever the mentality is here, from making the 1st Cavalry and the 7th Infantry Division 100 percent U.S. troops, and it is a disgrace. That is what I say. I know exactly what the problem is.

I wish that I could alert the average man in the street on this. The people of the country do not know this. They would not stand for it.

FORMOSA

Mr. Secretary, did you get into Formosa?

Secretary BRUCKER. Yes.

Mr. FLOOD. Did you get into Quemoy?

Secretary BRUCKER. I did not get into Quemoy on this trip.

Mr. FLOOD. General, have you been to Quemoy?

General LEMNITZER. I have.

Mr. FLOOD. I was there.

General LEMNITZER. I was there during a big bombardment in 1957.

Mr. FLOOD. I was there. I got up into those caves.

General LEMNITZER. It was just 3 years ago today that I was on Quemoy.

Mr. FLOOD. You still look good. Did they serve you after lunch any of that white wine that has been used for jet fuel in case they run short?

General LEMNITZER. I was not there for lunch.

Mr. FLOOD. Fortunately I do not drink anything alcoholic, but the poor major that was with me will never be the same. He was a tanker, too, and they are pretty tough characters.

The tanks that you have given that wonderful Chinese combat force on Quemoy, the tanks that they have in the caves and the tanks that they will have to take down on the beaches to hit an invasion are a sham. I would not train Troop 26 of St. Stephens Boy Scouts in them. They are a disgrace and they know it.

General LEMNITZER. But they have a considerable capability for that particular mission, Mr. Flood.

Mr. FLOOD. They have a considerable capability for not much of a mission. They are awful looking things.

General LEMNITZER. They would not be good tanks where you have long distances to move over land, but the situation there is operating in a very restricted area. This is the result of the Chinese attempting to get the very best out of the limited material they have available.

Mr. FLOOD. That is too bad. Here are men and all they want to do is fight the Chinese Communists last night, 24 hours a day. They are spoiling to fight them, and if they come in there they will fight them and die to a man, everybody, no question about it. If any Americans doubt that, look at this record about what they will do. But any tankers who go down on that beach in those tanks are suicide squadrons. They may serve the purpose, but it is suicide. It is a shame that we hold our hands out to these people to the southeast Asia and the Pacific, Army people, good fighters, and give them the kind of equipment that some of them have. It is an outrage.

It is too bad. This business of money and dollars in the budget look awfully bad when you are out on the line.

Mr. FORD. Those tanks to which you refer are not supplied out of this budget but are on the mutual security appropriations bill.

Mr. FLOOD. I understand that perfectly. I am talking to Army people. I know where they come from. I will have more to say about that. That is true, Mr. Ford; yes, indeed.

On the same question, and from the same budget of the mutual security, I want you to examine the advisability of putting shoes on the Chinese national infantry. I want to know what it will cost.

Now, do not have somebody write me a letter and say that they prefer to fight with the sneakers they have. I do not believe it. I talked to their officers and men. That is the story on the island, and that is the story in the U.S. Army training cadre there. But your Army people there do not believe it. The Chinese General Staff does not believe it, and neither do the troops. For a comparatively small sum you can put shoes on them. I saw two crack divisions of Chinese infantry, and I mean crack divisions. They were pretty good looking troops. I have seen a lot of troops. They march like Germans, so good at discipline. They have sneakers on. I know the story about orientals liking them and they are good in the jungle. That is not true. How much will it cost to put shoes on them? Not very much. I have the figure, but I want you people to put a figure in on how much it will cost to put shoes on the Chinese nationals.

General LEMNITZER. On the Chinese infantry or the Chinese National Army?

Mr. FLOOD. The Chinese National Army.

General LEMNITZER. We will get it.

(The information requested follows:)

It is assumed that an initial issue of two pairs of leather combat boots would be required for each soldier so equipped in the Chinese National Army with a replacement rate of one pair per year per soldier on an austere basis. Raw material for locally manufactured combat boots would cost approximately $3 per pair. Boots provided from U.S. procurement currently cost $6.70 per pair.

Assuming an average strength of 400,000 to be supported, the cost would be as follows:

	Million
Initial requirement, 2 pair per soldier:	
Raw materials (800,000 at $3)	$2.4
U.S. procurement (800,000 at $6.70)	5.36
Annual maintenance, 1 pair per soldier per year:	
Raw materials (400,000 at $3)	1.2
U.S. procurement (400,000 at $6.70)	2.68

Mr. FLOOD. If they are going to do any fighting, they are going to do it in pretty tough country.

ALASKAN COMMAND

I was up with Mike Michaelis up in Alaska. I talked to General White about this the other day. We went through the briefing on the Kamchatka setup and our setup there at some length. I think there should be two operational units of IRBM JUPITERS in Alaska zeroed on Kamchatka. I know the other fellow has zeroed on Alaska. He only needs two. What are we going to do about this Alaskan Command? Have you had a chance to talk about it yet, General?

General LEMNITZER. Yes. We have discussed it at great length.

Mr. FLOOD. You are jammed up there in Anchorage against that coast, no communications on roads south or the interior worthy of the name. You are stuck up there between the seacoast and the mountain range all in one nice neat little package. What are we going to do about it, anything?

General LEMNITZER. I am not sure what aspect you are referring to. On the question of the IRBM's, there is a difference of opinion on the advisability of putting them there. I happen to be in agreement with you on this one. There is, however, a difference of opinion on it. I believe that we could make better use of Alaska because of its strategic location, its proximity to the very threat which you have mentioned.

As regards the two battle groups, and the two NIKE-HERCULES battalions under General Michaelis' command, they would only be the initial forces to defend Alaska. I am sure that General Michaelis mentioned his proposal to change over some of the standard types of equipment for our battle groups and to equip them with equipment that will more nearly fit the climatic conditions there. He is particularly interested in the weasel-type vehicles for maneuvering in snow and we are going to provide him with them.

Mr. FLOOD. General Michaelis had not been there very long when I got there. His household furniture had not arrived, but I talked to his crowd.

General LEMMITZER. We are going to provide him a changeover in the type of equipment he presently has which will give him greater mobility, both in snow and cross country during the summer months. After all, the forces that are in Alaska at the present time are only the initial forces, and we do have plans to reinforce that area rapidly from our STRAC. We are going to move one of the 4th Division battle groups from Fort Lewis, Wash., to Alaska this year for maneuvers.

Mr. FLOOD. I want to keep pounding at this because this has nothing to do with the fact they are now a State, but I do not want them to be up there at the end of the line. I do not want them to be forgotten. Somebody has to keep talking about this. Everybody talks about Western Europe and the Far East. I have been up there. That is tough country for this kind of a show.

General LEMNITZER. Yes, it is. But, they are not forgotten, I can assure you. They play a very prominent and important part in our plans.

Mr. FLOOD. That is why I make the trips. You know how they cry on your shoulder when you show up.

Secretary BRUCKER. I was there a week ago Sunday and the two battle groups were there in their overwhites and snowshoes and skis. I was very much impressed. Also, the battle group had come up from Fort Lewis for a maneuver. There is going to be a maneuver there during the latter part of February and the first week or so in March. That is the annual maneuver that we have. This year it is called Little Bear.

Mr. FLOOD. What about road communications and railway connections? South from there there is nothing. Back into Fairbanks there

is one little strip that can be zeroed out. How are you going to get back to Fairbanks?

Secretary BRUCKER. They are going to go overland on this. They do it each year. Of course, it is a snow operation, a mountain operation. They have equipment for that purpose which is there and which the battle group will use.

Mr. FLOOD. That is an exposed flank.

Secretary BRUCKER. It certainly is. There is not any doubt about your comment about Alaska. I share what you say about it, but I am just adding so you will know instead of its being at the end of the line that General Lemnitzer and I are really for them.

Mr. FLOOD. On that entire Kamchatka Peninsula you wouldn't dare strike a match. I do not think they will let anybody smoke on that whole peninsula. It is loaded.

Secretary BRUCKER. I think that you are correct on that. The very least that ought to be there are IRBM's. I say JUPITER because I know what it can do. I think that that would change the balance up there awfully quick.

FORCES IN KOREA

Mr. FLOOD. General Magruder says that he is suffering from an undersupply of equipment. He says that he can hold until he gets some help with what he has, but he says he is undermanned, that his equipment is certainly not the best.

Now, here are two divisions right up against the Chinese guns. I was within 1,500 yards of the Chinese artillery up at that firing point. The Commanding General who wears three hats there says that he is undermanned, even with Americans, and his equipment is certainly not of the best by any means. It is not even as good as we have in other divisions. It is not as good as we have in the United States. Now, here we are again. Can the United States send two divisions into Korea and then can we not afford to give them the best hardware in the world? Why do not these two divisions, even if they are 70 percent only American, have the best training, the best guns, and so forth? Why do they not have ground to air where missiles are coming out of their ears? They do not have ground to air. You know the North Koreans. You know the Chinese outnumber you 3 or 4 to 1 in the air, and yet they do not have ground-to-air support for these two divisions, or for the Koreans. Why in the world are these two front line divisions not the most modern and best equipped with plenty of backup in spare parts and ground-to-air support? They do not have it. Why not?

General LEMNITZER. It is a question of availability of resources again. I had the same command several years ago.

Mr. FLOOD. You are all right.

General LEMNITZER. And they are much better off today than they were when I was in command because we have suspended paragraph 13d of the armistice agreement. After 4 years of effort we succeeded in suspending that provision of the military armistice because the Communists were violating it and we now have modern equipment there. It is not the M–113 that we are talking about here for personnel carriers, but they do have personnel carriers. This is a question,

that we in all of the services face, that of distributing our equipment across the board so as to make the best possible use of it. I do not know in any particular respect that the two divisions in Korea do not have good, serviceable equipment.

Mr. FLOOD. I know that is right. You know what I mean. What you said is so, they have good, tested, serviceable equipment.

General LEMNITZER. That is right.

Mr. FLOOD. But it is not the best and it should be the best.

General LEMNITZER. In some respects it is the best. The HONEST JOHN units comprise our best HONEST JOHN type of equipment.

Mr. FLOOD. Good. What I want the record to show, in the remote contingency that somebody might read it and know what is going on, which I doubt—is what the situation is. I do not go into these areas to go to cocktail parties. I know what I am talking about, and it is serious.

General LEMNITZER. I know that, Mr. Flood. The forces in Korea will give a very good account of themselves.

Mr. FLOOD. Surely they will, and I hope they have plenty of chaplains because they will need the chaplains.

Here is the language of General Magruder, and I quote: "We can live from day to day, but we cannot stand a run on the bank."

He can barely fight and barely hold and will have to have aid by air, sea and everything to hold.

General LEMNITZER. I do not know by what authority that quotation is given. I would not vouch for its accuracy. I do not agree we can only fight on a daily basis. We are very much better off in Korea than we have been in the past several years.

Mr. FLOOD. Let me read this:

> Tanks, motor vehicles and communications equipment being used by the American and Korean forces here is old, often costly to maintain, especially in the case of the vehicles, but it is not correct to say that they are obsolete.

They are not obsolete. And the reason they are not obsolete is because they still work. Anything in the Army that still works is not obsolete. That is about it. It is not what they should have.

General LEMNITZER. Is that quotation referring to the American equipment or the equipment with the Republic of Korea Armed Forces?

Mr. FLOOD. Both.

General LEMNITZER. As to what we would like—of course, we would like to have the very latest type of equipment, but the facts of life just do not permit it.

Mr. FLOOD. I know. I know what the facts of life are. I sat there in those trenches with them. Those are the facts of life, too.

Well, I think that we have debated this thing with Mr. Mahon leading the discussion long enoug. There is no sense going into it.

CARIBBEAN AREA

What do you plan sending into the Caribbean area?

General LEMNITZER. Could I go off the record on this, because it is a very sensitive area?

Mr. MAHON. Mr. Flood, your time is up.

Mr. FLOOD. If it is off the record, I would like to know off the record in a sentence or two what you are doing up in the Caribbean. I have some special interests there.

General LEMNITZER. Off the record.

(Discussion off the record.)

Mr. FLOOD. Mr. Chairman, I was sure I would not get to these questions on missiles and the Army in space and transportation, et cetera; so I will submit these questions. I had them yesterday.

I believe Mr. Riley asked a series of questions on modernization which may eliminate a half dozen questions I was going to ask on the same thing. If so, let us not duplicate anything.

Mr. MAHON. Mr. Sikes asked some of the same questions.

Mr. FLOOD. Mr. Sikes was asking questions mostly on tactical air particularly. There may have been one or two however.

(The questions submitted by Mr. Flood follow:)

FISCAL YEAR 1961 ARMY BUDGET

1. Do you consider the present and projected rate of modernization within means available in fiscal year 1961 budget is adequate? What are the major areas of modernization which you believe should be expedited? What impacts will the unsatisfactory rate of modernization have on the Army's readiness and capabilities?

(The information is as follows:)

Mr. BRUCKER. Both the Chief of Staff and I have testified that we do not consider the present and projected rate of modernization fully satisfactory. We would like to see it expedited first in our basic modernization items such as the new rifles, machineguns, armored personnel carriers, and tanks. Our surface-to-surface and surface-to-air missile programs, our aircraft programs, our communications and surveillance programs should move at a faster rate. We are ready to fight with our current weapons, but each year of delay means one more year in which we face the risk of fighting with less than the best weapons. The exact degree our readiness and capability is reduced by the difference between having a 1939 model rifle in a soldier's hand and a 1959 rifle in those same hands cannot be expressed in arithmetic terms, but giving him these new weapons will produce an increased capability both because of the increased mechanical efficiency, and the lift in morale which goes with the use of the most modern weapons.

2. On what specific items of major equipment do you consider that the rate of modernization is unsatisfactory? What are your recommendations to correct these inadequacies?

(The information is as follows:)

Mr. BRUCKER. I am not satisfied with the rate of modernization in those items I have just mentioned: the M–14 rifle, the M–60 machinegun, the M–60 tank, the M–113 armored personnel carrier, as well as HONEST JOHN, LITTLE JOHN, SERGEANT, PERSHING (when developed), REDEYE, and HAWK. We would like to move faster in our new self-propelled artillery, in fixed wing and rotary wing aircraft, and in communications equipment of all types. The only way to really correct current and projected deficiencies is to increase resources available to the Army for the procurement and production of these items.

3. I know you have studied carefully what the Army requirements for manpower and equipment are: Last year the Army furnished this committee a so-called shopping list. I would like for you to furnish the committee a similar document for fiscal year 1961. Can you provide the committee this list of Army needs?

(The information is classified and will be submitted separately.)

4. Are you satisfied with the Army's contribution to the air defense of this Nation? What I want to know is this: Have you been given the means (money) which will permit the Army's contribution to the air defense of this Nation to be that which you believe is necessary?

(The information is classified and will be submitted separately.)

5. What major advances in Army equipment now in the hands of troops have been made since World War II?

(The information is as follows:)

Mr. BRUCKER. Our new missile systems are significant examples of the advancement of equipment in the hands of troops since World War II. Our 90 mm. and 120 mm. air defense weapons, so effective in that war, have been replaced by the NIKE-AJAX and NIKE-HERCULES surface-to-air missile systems. We have extended the range of our conventional artillery by the introduction of surface-to-surface missiles such as the CORPORAL, REDSTONE, and HONEST JOHN. These missile systems have also been reoriented toward improved maintenance by plug-in packages called modules instead of piecemeal part replacement. The major advances in conventional type equipment in the hands of troops has resulted in the development and use of helicopters for increased battlefield mobility and medical evacuation, the development and use of combat surveillance and target acquisition equipment such as forward area radars and drone systems.

DEFENSE AGAINST ATTACK LAUNCHED FROM SUBMARINES

1. What capabilities does the Army have against a nuclear attack by submarines?

(The information is classified and will be submitted separately.)

2. What capabilities does the DOD have against a nuclear attack by submarines?

(The information is classified and will be submitted separately.)

3. What defense is planned against such an attack?

(The information is as follows:)

When deployed, the Army's NIKE-ZEUS system will provide the CONUS with an active defense against submarine-launched ballistic missiles.

4. With present defenses, how close to our shores can enemy submarines advance to launch an attack on this continent?

(The information is as follows:)

Considering the 1,000- to 1,500-nautical mile range of submarine-launched ballistic missiles and the shorter 600 to 700-nautical mile range of cruise-type missiles, it is apparent that hostile submarines do not have to approach our shores closely to attack coastal targets. The effective range of such missiles can be extended to inland targets, however, by attack from positions close to our coastline. Not considering the Navy's ASW capability, the only restriction as to how close an enemy submarine can advance to our shores to launch an attack is the depth of the water. Generally, this will prevent an enemy submarine from advancing closer than the Continental Shelf on an underwater approach. The keel depth, approximately 60 feet, is the restricting factor as to how close such a ship can approach on a surface attack.

5. What type of weapons would such enemy submarines use?

(The information is classified and will be submitted separately.)

6. Are these weapons available today for the submarines?

(The information is classified and will be submitted separately.)

7. How long do you estimate it will take to develop such a defense?

(The information is classified and will be submitted separately.)

INTERCONTINENTAL BALLISTIC MISSILE DEFENSE

1. What capability does the United States now have against an attack by intercontinental ballistic missiles?

(The information is as follows:)

ICBM DEFENSE

We have no capability to detect or defend against such an attack.

2. What capability against such an attack is planned?

(The information is as follows:)

The Army is developing the NIKE-ZEUS anti-missile-missile system as a matter of urgency to provide the CONUS with an active defense against any Soviet ICBM or submarine-launched ballistic missile attack.

3. Would you comment on the relative capabilities of the Soviet versus the United States in this field?

(The information is classified and will be submitted separately.)

7. What is the earliest date you believe we will have an operational capability against ICBM?

(The information is classified and will be submitted separately.)

THE ARMY ROLE IN SPACE

1. What is the Army's role in space?

(The information is as follows:)

General LEMNITZER. 1. The Army conceives its role in space in the following general context:

(*a*) Space is a newly attainable, virtually unexplored medium; it is properly considered a fourth environment, distinct from land, sea, and air and possessing such unique characteristics as no atmosphere, high vacuum, extraordinary extremes of temperature, lethal radiation, weightlessness, motion by means of gravitational force, and velocities of totally unprecedented magnitude. The physical magnitude of this environment and the scope of effort entailed in its conquest stagger the imagination. An unequaled national effort is involved.

(*b*) Space as an arena of military operations is only conjectural at this time. It is our national policy that activities in space should be devoted to peaceful purposes for the benefit of all mankind. Nevertheless, we must bear in mind the fact that it is most difficult, if not impossible, to distinguish civilian from military space applications particularly on the part of other nations. We cannot afford to become so preoccupied with space only as an arena for scientific endeavor that we some day find ourselves unable to exercise an option between peaceful and military applications of space.

(*c*) The military space program should be developed in such a context and under the following concepts:

(1) Attempt to fix military responsibilities by automatic extrapolation of earth roles and missions is not meaningful. As example, the lack of an aerodynamic atmosphere or free water on the moon would hardly justify a preemptive Army claim to lunar operations.

(2) Military exploitation of space offers opportunity for all services to improve their performance of earth roles and missions, plus the possibility of operations in space itself.

(3) In view of its uniqueness and its military potential for all services, space transcends the exclusive interest of any one military service.

2. Within the framework of this philosophy, the Army considers its role in space to be as follows:

(*a*) Space activities to support its present roles and missions: Such activities can improve, and in some respects contribute uniquely to the Army's present capabilities. Examples are communication satellites; satellites for mapping and geodesy to extend geodetic control into inaccessible and unexplored areas of the earth; meteorological satellites to provide improved information for commanders of the land battle; reconnaissance satellites to serve these commanders as well as others. Based on technical considerations, early defense of earth against hostile space objects appears best realizable by extension of antimissile defense systems, an area in which the Army also has an interest under its presently assigned missions.

The Army does not lay preemptive claim to development or operation of all of these systems in which it has an interest. As discussed below, the Army seeks primary responsibility for certain of these, but its interests range over a wide spectrum of participation, from that of prime responsibility, to the role of a "user" of an end product (e.g., strategic intelligence).

(*b*) Support of Department of Defense space projects (as directed and funded): In the past the Army has conducted numerous research projects for DOD as awarded and funded by the Advanced Research Projects Agency (ARPA). Some principal ones have been the SATURN booster program, advanced research into satellite communications, satellite surveillance, and tracking.

(*c*) Support of nonmilitary space programs as directed: The transfer to NASA proposed for the Development Operations Division of ABMA is perhaps the outstanding example of this aspect of Army support of the national space program. As another example, the Army is supporting the NASA Mercury program with a number of Redstone vehicles for the first manned ballistic flight into space.

(*d*) Future developments: In addition to space systems for which the Army now seeks responsibility (discussed below), the Army desires to participate in space research and development in anticipation of future requirements. This view is consistent with the concept expressed above that development of space exceeds the capacity of any single military service, and that automatic extrapolation into space of present service-assigned roles and missions is not meaningful.

3. With respect to specific space systems, at this time the Army seeks funds and development responsibility for communication satellites, mapping and geodesy satellites, a space surveillance system, and an antisatellite defense system. Other services may well participate in development and support of these systems but the Army believes it is best fitted for the overall responsibility.

4. Communication satellites will greatly increase the security, capacity, and reliability of our vital worldwide Army command and administrative net which serves many agencies in addition to the Army. Proper performance of the Army's mission of providing mapping and geodetic service to all military services demands Army exploitation of space technology to this end. In keeping with its air defense mission and its assigned responsibility for the development of the NIKE-ZEUS, the Army is also concerned with the detection, identification, location, and destruction of hostile space vehicles as well as missiles. The worldwide space surveillance and control system is another area in which the Army has both competence and a particular interest by virtue of its earth-based missile and space surveillance experience and its existing communications networks.

5. The above discussion of space systems logically leads to the problem of their effective coordination and control, first in development, and subsequently in operations. At this stage DOD is in process of transferring specific systems from ARPA to appropriate military departments for further development toward operational systems. An immediate problem today is a need for close coordination of the expensive support facilities, such as launching sites, missile ranges, detection and tracking facilities and recovery means. In the Army's view, the establishment of a joint military organization is the reasonable answer. Eventually, expansion of this joint organization into a unified space command for control of operational systems would probably be appropriate as the level of operational activities increased sufficiently to warrant it.

2. How important is the Army's knowledge of space to the defense of this country?

(The information is as follows:)

General LEMNITZER. 1. As a basic frame of reference in answering this question, it should be recognized that at this time the military utilization of space is necessarily conjectural in many respects. Military applications in support of earth operations can be readily foreseen; space itself as a military arena is subject to future developments (not necessarily under our control); military operations on other astral masses are most conjectural of all, though in this explosive age of technology they cannot be dismissed as being fantastic.

2. It is the Army view that the military exploitation of space is a project of tremendous magnitude, exceeding the capabilities of any single military service. Further the automatic extrapolation into space of present earth missions of the services is not meaningful. Accordingly, military exploitation of space should be a unified military effort under a joint military organization.

3. So far as the Army's knowledge of space can contribute to the national defense, this question may be appropriately considered in two aspects: (*a*) the Army's present knowledgeability, and (*b*), future requirements.

(*a*) Present knowledgeability:

(1) The Army's general, widespread competence in research contributing to space effort will be outlined below. A specific competence of the Army unique in the free world has been the Dr. von Braun team of rocket and space scientists. Subject to congressional approval, the services of this team will be transferred from the Army and DOD to NASA. The success of this group in the free world space effort is well known.

(2) In the past the Army has given tangible evidence of its competence and knowledgeability in space activities by an impressive list of "firsts." It was first in the free world in penetration into outer space, development of large multiple stage missiles, successful reentry and recovery of nose cones, including those with live primates. The Army put up the first free world satellite, the first lunar probe, the first sun-orbiting satellite, and designed and operated the first communication satellite, Project Score. The

first detailed topographic map of the moon is now being prepared by the Army, and in the future, under the auspices of NASA, the Army will launch the first man into space with its REDSTONE missile.

(3) The Army has additional competence in space technology. It owns and operates approximately $1 billion worth of research and development facilities. The research and development resources of the Army include approximately 40,000 personnel, a high percentage of which are scientific and engineering personnel. These personnel and facilities are supported during the current fiscal year by a three-quarters of a billion dollars effort from industry and private institutions.

(*a*) Current research with space applications includes the fields of electronics, propellants, heat rejection, space intercept systems, biomedicine, and ballistic missile defense. The first man in space under NASA's Project MERCURY is planned for the U.S. Army in a modified REDSTONE missile.

(*b*) Army efforts in electronics have resulted in some of the most advanced space surveillance systems the Nation has. The Signal Corps is now conducting a number of satellite and satellite systems programs for the Army, for NASA, and for the Advanced Research Projects Agency (ARPA).

(*c*) The Corps of Engineers is especially experienced in constructing missile bases, launching and space tracking sites, and simulated environment facilities.

(*d*) The Army Map Service is making the first real topographic map of the moon. Geodesy and selenodesy, which are the sciences of topography, shape, and size of the earth and moon respectively, are specialties of this Service.

(*e*) The Army Medical Service has responsibility for the biomedical aspects of Army missile programs, and has responsibility for the psychological aspects of NASA's Project MERCURY. The Army Quartermaster Corps is engaged in the development of nonperishable food pastes and tablets for consumption under zero gravity conditions, the utilization of algae for food production and oxygen regeneration, studies of the effects of confinement, and development of special clothing, shelters, and handling equipment. The Army Transportation Corps is supporting national missile and space programs in managing the movement of personnel and material, and in developing techniques for handling and moving missiles, space vehicles, and ground support equipment. The Army Chemical Corps is presently engaged in work in radiation dose and spectrum measurements, shielding requirements, nuclear weapons effects, chemical oxygen production, toxicity studies, and other activities relating to the protection of man from biological, chemical, and radiological hazards.

(*b*) Army's future requirements in space knowledge:

(1) It bears repeating that the Army views space as a new, the fourth, environment, with unique characteristics of which no one, let alone any single military service, has any adequate experience. No facile, extrapolations are meaningful: as discussed in answer to a previous question, a superficial earth-based consideration of who should have military primacy on the airless, waterless moon indicates what dilemmas would derive from too simple analogies. Further, the exploration and exploitation of this uniquely vast as well as uniquely new environment will demand the maximum contribution of every available national resource, industrial, scientific, and political as well as military.

(2) In this light, the Army considers that its already varied and competent capabilities should be supported and exploited for the future contri-

butions they can make to this great demand. It is the American way to encourage simultaneous research and invention, with the constructive idea that multiple free approaches are productive above and beyond their duplication of effort. The great demand of space technology requires such an approach.

(3) Accordingly, the Army seeks support for continuation of its knowledge in this unique area, space, and equitable participation and support in space operations. In view of the magnitude of effort required for a successful national space program, in which defense requirements are assumed as discussed above, the present and attainable knowledge of the Army are considered essential.

3. Is space vitally important in military communications systems?

(The information is as follows:)

General LEMNITZER. Space is vital to military communications because the use of communications satellites provides a new dimension in reliability and capacity to global communications. The military global communication network is the media through which vital information flows from remote areas of the world to the Secretary of Defense and through which he exercises strategic command and control of the unified and specified commands. Reliability of this network is essential to national defense. Through the use of communication satellites, reliability is gained by the use of microwaves for vital intercontinental circuits. We are present dependent on high frequency radio systems susceptible to degradation by unfavorable atmospheric conditions and vulnerable undersea cables.

Even if adequate capacity were possible, the shortcomings of current links in intercontinental trunks are serious. Only a small portion of the radiofrequency spectrum can be successfully used for ionospheric relay and intrinsic bandwidth limitations result in limited capacity to the system. It is possible for hostile jamming transmitters to completely disrupt virtually all circuits. High frequency systems are therefore not always reliable. Cables are extremely vulnerable to disruption and require long leadtimes to establish communications to a new area. The National Security Council, in recognition of the threat of loss of communications has directed that all possible means of reducing vulnerability of communications be explored.

National survival would be jeopardized by an inadequate worldwide communication capibility. Any measures which offer promise of alleviating this serious problem must be exploited as a matter of urgency. The use of satellites will result in greatly improved and reliable communications with rapid delivery of messages.

4. What provision has been made for Army utilization of space in its communication system?

(The information is classified and will be submitted separately.)

5. Are you satisfied with the progress being made by the Army in development of equipment for mapping and geodetic survey work from space vehicles?

(The information is classified and will be submitted separately.)

FUNDING AND MANAGEMENT OF RESEARCH AND DEVELOPMENT

1. Are the research and development and operational costs of the long-range bomber forces decreasing significantly as development and production proceeds on long-range missiles?

General LEMNITZER. Since the research and development and the operational costs of the long-range bomber forces are the function of the Air Force, the Army is not in a position to supply the information requested.

2. Is the Army research and development program losing flexibility to a dangerous degree because of the necessity of funding long-range established projects before funding of newly and perhaps more important projects can be undertaken?

General LEMNITZER. The loss of flexibility inherent in the funding of existing long-range programs in Army research and development is not considered serious. The continuous review of all Army research and development programs permits the comparison of new projects with existing ones. When such new projects are of sufficient importance, and if emergency funds are not available, resources are reprogramed from lower priority existing projects.

3. Has progress on the Army research and development program during fiscal year 1960 been hampered by the Bureau of the Budget or the DOD withholding funds appropriated by the Congress?

General LEMNITZER. The Bureau of the Budget has withheld approximately $29.6 million of fiscal year 1960 R.D.T. & E. funds. In addition, the Office of the Secretary of Defense directed that no contractual obligations be incurred on projects totaling $30.4 million without the prior approval of that Office. The greater part of these funds and restrictions had been released as of January 29, 1960. While these restrictions have caused administrative delays in executing the program, they have not caused significant delay in the actual accomplishment of research and development work on the projects involved.

4. To what extent is responsibility for research and development on various types or classes of equipment centralized in one of the services?

General LEMNITZER. The centralization of responsibility for research and development on various types or classes of equipment is directed by the Office of the Director of Defense Research and Engineering. Only that office could provide a complete response to the question.

5. Are there plans for further centralization of research and development responsibility to lessen duplication between the Army, Navy, and Air Force?

General LEMNITZER. The Department of the Army is not informed on any plans the Director of Defense Research and Engineering may have for further centralization of research and development responsibility.

6. There are many who have said delays in decisions have delayed important research and development. Are decisions being made in the Pentagon much more rapidly now? If not, why do these decisions take so long?

General LEMNITZER. Key officials in the Department of Defense concerned with research and development are keenly aware of the importance of reducing delays in decisions which in turn cause delays in our important research and development programs. However, attempts to reduce decision leadtime on vital projects are offset in many cases by the growing complexity of possible warfare in the years just ahead. Much of today's military equipment is tremendously complex; that of tomorrow is even more so.

Looking toward the uncertain future, important decisions in research and development must be made in the light of exploding technology, which opens new fields of strategy and materiel in areas where we have no actual experience. The uncertainty concerning the nature of future warfare and the rapid and uneven growth of our technical capability make decisions difficult and susceptible to recurring review. At the same time, the cost and strategic importance of many of our major projects make it necessary to review the problems and the associated recommendations at several echelons of command and staff prior to reaching a firm decision.

In summary, while there is a genuine interest in reducing decision leadtime, which in some cases impedes research and development, the problems of designing materiel and techniques for future warfare have become so complex that it is very difficult to arrive at prompt and proper decisions in many cases. Under these conditions, it appears that we are making relatively little progress in arriving at more rapid decision on all major problems.

7. What is being done to speed up decisionmaking on matters related to research and development?

General LEMNITZER. As indicated in the response to the previous question, the decisionmaking process in matters relating to research and development is becoming increasingly more complex as weapons and equipment become more complicated and costly. The Army has given considerable thought to the problem of reducing development leadtime and we recognize that decision leadtime is an important element of the overall problem. The Army, among other approaches, is attempting to compress the procedures and staffing which precede the clear

statement of a problem requiring a decision. As an example, a recent revision of the Army regulation governing research and development sets up specific check points within the development process for coordination and review in order to expedite the recognition and consideration of conditions requiring a decision. The recent establishment of the research, development, test and evaluation appropriation has increased research and development program flexibility and permitted decentralization of authority for effecting program changes in plans for procurement of equipment for test and evaluation. The Army is continuing to study this problem with the view to improving organization and procedures.

JUPITER IRBM

Mr. FLOOD. I would like you to comment, General, on the desirability and advisability of changing the Key West agreements to permit JUPITER to be a mobile Army artillery weapon and increase your air poundage to 10,000 pounds.

I want JUPITER as a mobile field artillery missile with the Army.

General LEMNITZER. I believe that JUPITER and its descendants should be mobile. The Army has long held that our long-range missile effort must take advantage of the security afforded by mobility. Missiles capable of constant movement, particularly in the wastelands of the world, would not only be very difficult to locate with sufficient precision to destroy, but would draw enemy interdiction efforts away from more thickly populated areas. Within the military services, the Army naturally is the most experienced in the movement problems involved in the deployment and operation of a land mobile weapon systems.

With respect to the weight limitations on Army aircraft, the Army does not consider it advisable or desirable to have any weight limitations imposed on any Army aircraft.

Current weight limitations have had an adverse effect on the Army's research and development efforts. Despite the fact that two exceptions to the weight limitations on Army aircraft have been authorized by the Secretary of Defense (AC–1 Caribou 17855# and AO–1 Mohawk 7700#), the weight limitations have inhibited the thinking of Army planners and the initiative of the aircraft industry to produce new aircraft for the Army.

In general, the Army believes that it should not be prohibited by various limitations from developing equipment which it considers essential in carrying out its assigned roles and missions.

Revision of the current version of the Key West agreement would not be necessary in order to return the mobile JUPITER to the Army or to correct the present limitations on Army aircraft. Both could be accomplished by reversal of decisions made in extension of the Key West agreement.

HELICOPTORS

Mr. FLOOD. I wish you would explain this question of the choppers you are using more as hedgehopping antitank weapons, and missiles from choppers as a combat weapon.

General LEMNITZER. The possibility of nuclear warfare, with its forced dispersion of combat units and the attendant need for rapid massing, places a tremendous requirement on the Army for mobility. We know we can move riflemen around the battlefield by Army aircraft. However, these riflemen cannot live very long unless they receive a rapid buildup of supporting fires. To give our supporting

weapons the same mobility as our assault troops, the Army is testing various weapons systems using the helicopter as a basic platform. This includes the use of machineguns, rockets, and wire-guided antitank missiles. With respect to the latter, in field tests the Army has successfully fired these missiles against moving tanks with a high assurance of kill. Unlike the fighter-bomber, these aircraft will operate habitually at treetop level, shooting generally from hovering positions close to cover, behind which they may drop promptly when engaged by enemy fire. With the new mobility which aviation offers us, it becomes a matter of life or death to our infantrymen that supporting weapons achieve a similar mobility.

Mr. FLOOD. I wish you would comment at your level on choppers as sky cavalry for skirmishing.

General LEMNITZER. The traditional reconnaissance mission has been greatly magnified on the nuclear battlefield. Gaps of several thousand yards will exist between units—targets will be fleeting and elusive. To meet this problem the Army has found it entirely feasible to integrate aviation and reconnaissance units to form a completely air-mobile force.

This "air cavalry" unit, equipped with organic armed aerial vehicles, will perform the following missions:

Covering an advance, flank, or rearguard action.

Controlling or denying terrain remote or inaccessible to ground vehicles.

Securing rear areas against enemy airborne, guerrilla, or infiltrated units.

Crossing and entering areas of nuclear contamination.

Army aerial vehicles, far more mobile than surface transport, provide the best means of accomplishing these reconnaissance missions.

The Army is testing this basic concept at Fort Stewart, Ga., with a unit known as the Aerial Reconnaissance and Security Troop. This troop, in which every man rides in a helicopter, is organized into an aeroscout platoon, an aerorifle platoon, and an aeroweapons platoon. For vehicles they employ 16 small observation helicopters and 11 larger helicopters, some armed with machine guns and rockets. It is a completely air-mobile unit designed to live and fight in the battle area. All testing to date has indicated that this concept is indisputably sound.

OPERATION GYROSCOPE

Mr. FLOOD. I wish you would tell us why you dropped the rotation program for Army troops.

General LEMNITZER. GYROSCOPE?

Mr. FLOOD. Yes.

General LEMNITZER. Because of personnel limitations the support of Gyroscope was producing severe limitations upon the flexibility and employment of the strategic Army forces, particularly in the Strategic Army Corps (STRAC). Hence, a decision was made in August 1959 to test a modification of Gyroscope. This trial system, called the oversea unit replacement system, or OVUREP, was designed with a view toward eliminating the undesirable facets of Gyroscope, at the same time retaining its desirable elements, and testing the current wartime replacement doctrine of unit replacement. The first

OVUREP unit, the 1st Battle Group, 11th Infantry, 2d Infantry Division at Fort Benning, Ga., will start the OVUREP cycle on February 14, 1960.

At the time that the OVUREP modification of GYROSCOPE was adopted Gyroscope operations were confined to the United States and Europe. Korea has been selected as the oversea test area for OVUREP. The personnel support of Army forces in Europe is being accomplished by a combination of the personalized individual replacement system and the carrier company replacement system. Under the latter system replacements are sent overseas in companies composed of four-man teams which have undergone advanced individual training together and which go into their first unit together. This system provides a continuity of association and friendship for our young soldiers and has been highly successful since its inception in September 1959.

OVERPAYMENTS TO ARMY PERSONNEL

Mr. FLOOD. General Traub, I wish you would comment on the GAO's allegations of some $15 million pay and allowance overpayments to Army personnel last year.

(The information to be supplied follows:)

MILITARY PAY DISCREPANCIES DISCOVERED IN FISCAL YEAR 1959

1. Information received from the Finance Center, U.S. Army, indicates that while $16.6 million in pay discrepancies were established as accounts receivable during fiscal year 1959, a total of $8.3 million was collected during fiscal year 1959 representing approximately 50 percent of the accounts established.

2. The audits by the Finance Center, U.S. Army, disclosed $14.4 million of the $16.6 million and reflect the results of the aggressive and improved examination procedures at that installation. A total of $2.2 million was disclosed by the Army Audit Branch of the General Accounting Office.

3. It should be recognized that many pay discrepancies reported represent pay adjustments of a temporary nature which are generally recovered in a short period of time as evidenced by the high collection rate. Unfortunately, this tends to distort the amount of the true overpayments which in the final analysis is the residue of pay discrepancies remaining after all recovery action has been exhausted by the Finance Center, U.S. Army, General Accounting Office, and the Department of Justice over an extended period of time.

4. From the category of errors made, it has been concluded that the pay discrepancies are primarily attributable to the following:

(*a*) The furnishing or certifying of erroneous data to the disbursing officer.

(*b*) The failure to apply prescribed procedures and controls.

(*c*) The misapplication of complicated laws and regulations.

5. The summary of principal actions (attached), concerning measures taken during the past year, should bring about a marked improvement in both the finance offices and unit personnel offices involved in the administration of military pay. Our new quality improvement plan of forwarding monthly reports of errors being made to each installation commander and to the appropriate commander of each Army area, technical service, administrative service, and oversea commands beginning February 1, 1960, will provide commanders with the basis for taking positive and effective action to reverse the overpayment trend.

ACTIONS TAKEN TO REDUCE OVERPAYMENTS DURING FISCAL YEAR 1959

1. The following is a summary of the principal actions taken during the past year in an effort to reduce and eliminate overpayments of military pay and allowances:

(*a*) November 1958—Department of the Army Pamphlet 600–10, "A Unit Personnel Officer's Guide to Military Pay Procedures," was issued on November 4,

1958. The purpose of the manual is to publicize the principal overpayment areas identified by audit reports and to suggest effective procedures to be used by unit personnel officers to prevent or minimize erroneous payments.

(*b*) December 1958—A military pay monitoring and study group was established in the office, Chief of Finance on December 1, 1958. The mission of the group is to develop and monitor a program to appraise and improve the military pay voucher system and reduce the error rate. Members of the group visit field installations and activities to ascertain problem areas at firsthand; they also conduct studies and research to determine how these problems may be overcome and how the military pay voucher system may be further improved. To date, the group has visited all major CONUS and oversea commands, including many individual stations.

(*c*) January 1959—On January 1, 1959, the military pay voucher system became operational on an armywide basis. One of the major objectives of the new system is to reduce erroneous payments. It is premature to form a final judgment as to the success of the system in attaining this goal.

(*d*) January 1959—Department of the Army Circular 37–17, "Internal Review Program—Military Pay Voucher System," was issued on January 2, 1959. The circular emphasized the essentiality of closely and continually observing the military pay voucher system to assure its sound administration within every activity having a responsibility for its operations. Commanders were directed to implement an internal review program as outlined in the circular. In addition, the principal overpayment problem areas were enumerated so that particular emphasis could be placed on these items in the internal review process.

(*e*) May 1959—The Chief of Finance wrote to each staff finance and accounting officer of the major commands and technical services and to each finance and accounting officer. The letters expressed the personal interest of the Chief of Finance in the erroneous payment problem and restated corrective measures to be taken to prevent overpayments. The need for advance planning, control and management techniques to improve finance service was emphasized.

(*f*) July 1959—A Department of the Army letter, dated July 15, 1959, was issued for the purpose of delineating staff responsibilities at major command and subordinate levels for correct military payments. The letter requires that commanders assign definite staff responsibility for military pay and such controls as will assure that erroneous payments are reduced to the absolute minimum.

(*g*) October 1959—A guide for finance and accounting officers in the operation of the military pay function under the military pay voucher system has been drafted and is currently being coordinated with interested staff elements and the Continental U.S. Army command. The guide should contribute to the effort to reduce overpayments.

2. The above is a list of special actions taken. In addition, there have been other regular and periodic actions to improve finance service. Technical letters are circulated periodically to all finance and accounting officers to publicize data concerning overpayments and to suggest corrective measures to be taken. The Army Finance Journal, published by the Army Finance Association, has been used continuously to point out problem areas with suggestions for minimizing overpayments, and is used as a medium for disseminating advance notice of new publications dealing with military pay and allowances.

3. Training has been increased at the Finance School, U.S. Army, and The Adjutant General's School to provide additional emphasis upon controls and procedures designed to improve military pay administration. The schools incorporated in their curriculums a greater emphasis on compliance with laws, regulations, and decisions of the Comptroller General of the United States so as to instill in the students a greater awareness of their responsibilities in the administration of military pay.

4. Every effort is made to issue regulations which provide a uniform and proper application of laws, directives, and decisions of the Comptroller General as to entitlement to military pay and allowances. All entitlement regulations are approved as to legality and uniform application by the Department of Defense Military Pay and Allowance Committee and the Per Diem Travel and Transportation Allowance Committee. Army representation on both these committees is supplied by the Office, Chief of Finance.

5. The Army Audit Branch of the General Accounting Office and the Finance Center, U.S. Army, maintain close liaison and work cooperatively to detect and prevent errors. In Washington, the Office, Chief of Finance, and the General

Accounting Office maintain constant communication on problem areas relating to military pay and allowances as they develop to insure that prompt and appropriate corrective action is taken.

6. The Chief of Finance has developed a quality improvement program in an effort to insure accuracy of the payments in the military pay and travel areas. All elements of the Office, Chief of Finance, and its class II installations, have included facets of the quality improvement program in their functions.

7. A speech was delivered by the Chief of Finance to the staff finance and accounting officers of the major CONUS and oversea commands in attendance at the finance conference held at Fort Benjamin Harrison, Ind., on November 2 through 4, 1959, emphasizing the necessity for personal interest at all levels in the program to eliminate overpayments.

8. In an effort to identify and reduce the type of errors being made under the military pay voucher system, the Finance Center, U.S. Army has been requested to prepare a monthly machine listing of error data for each disbursing office within the Army. This listing also will reflect the type of errors being made, number and dollar amount. Copies of these listings will be forwarded to the commander of each disbursing officer for appropriate action. The appropriate commanders of each Army area, technical service, administrative service, and oversea command will also be furnished, on a monthly basis, copies of the error data listings concerning each disbursing officer over which they exercise command jurisdiction.

9. The armywide distribution of the machine listings of error data should permit commanders at all levels of command to pinpoint the problem areas and initiate corrective action to reduce overpayment discrepancies. The initial listings of error data should be available to commanders on or about February 1, 1960.

10. The Chief of Finance will continue to place emphasis on the correctness of payments to military personnel.

RECOILLESS RIFLE

Mr. FLOOD. I wish you would examine this letter sent to me by General Trudeau.

Mr. Chairman, if it could be in the record, I would like this letter on the recoilless rifle to go into the record if it is proper that it should go in.

General LEMNITZER. Is it classified?

Mr. FLOOD. It is not so marked.

General LEMNITZER. It is not classified and there is no reason why it could not be put in the record.

(The letter from General Trudeau follows:)

DECEMBER 3, 1959.

Hon. DANIEL J. FLOOD,
House of Representatives.

DEAR MR. FLOOD: Thank you for your letter of November 24, 1959. It is a pleasure to know that you are interested in the new 90-mm. recoilless rifle that the Army has developed.

The recoilless rifle, 90 mm., M–67 is to replace the 3.5-inch rocket launcher (bazooka) as a medium assault weapon in infantry platoons. This weapon will give infantry platoons heavy close-in firepower, against enemy tanks, personnel, and fortifications, almost equal that of a medium tank. The new rifle will not replace tanks because it does not have the great range, versatility, accuracy, armor protection, or supporting machinegun fire of a gun mounted on a tank. This shoulder-fired weapon can be carried into battle and employed by teams of two infantrymen. One man carries the rifle and fires it, while a second man carries ammunition and does the loading. In emergencies, it can be carried, loaded, and fired by one man.

The rifle is 53 inches long and weighs 33 pounds. It has an effective range of 500 yards, which is more than twice that of the bazooka. The muzzle velocity is less than that of a revolver, and elimination of recoil is achieved by exhausting gases from a nozzle at the rear of the weapon. The shaped charge warhead

weighs 9 pounds and can penetrate the heaviest armor known. I am enclosing two photographs which will give you a better idea of the physical characteristics of the weapon and ammunition.

The recoilless rifle, 90 mm., M–67 was recently adopted as standard equipment and approved for production. Development and testing of the weapon cost approximately $4.2 million. Design, engineering, and overall direction of system development on the rifle was carried out at the Frankford Arsenal, Philadelphia, Pa. Component development and other work on the rifle was carried out by Midwest Research Institute, Kansas City, Mo.; Arthur D. Little, Inc., Cambridge, Mass.; Aberdeen Proving Ground, Md.; Picatinny Arsenal, Dover, N.J.; Canadian Armament Research and Development Establishment, Quebec, Canada; the Diamond Ordnance Fuze Laboratory, Bethesda, Md.; and Firestone Tire & Rubber Co., Akron, Ohio. Initial procurement is planned for fiscal year 1961.

I hope that the above unclassified particulars are sufficient. If not, please feel free to call on me for any additional information.

With best wishes.

Sincerely,

ARTHUR G. TRUDEAU,
Lieutenant General, General Staff,
Chief of Research and Development.

Mr. FLOOD. I would like a statement by me on the Army and its divisions and dispersals and components to be placed in the record at the end of this examination, Mr. Chairman.

Mr. MAHON. All right.

(The statement referred to follows:)

I believe that a strong modern Army is the key to national defense of the United States;

I believe that the security of our Nation is dependent upon the recognition of a fundamental principle that wars are fought for control of land areas and the people who inhabit them;

I further believe that the combat soldier on the battlefield is a decisive factor to our survival; accordingly he must have the most modern equipment that our great Army-industry team can produce;

There is no easy or quick solution to war and conflict; therefore, a new national strategy should be formulated that takes into account the following vital elements:

(1) The Soviet capability of launching thermonuclear-carrying intercontinental missiles against the United States.

(2) The absence of a program for the early production of the Army NIKE–ZEUS antimissile missile.

(3) The lack of an effective civil defense program; and the possibility that many millions of Americans would be casualties in the event of a thermonuclear attack on the United States.

(4) The fact that creeping aggression can be deterred only by soldiers capable of waging all forms of combat.

(5) A weak and inadequately equipped Army strengthens the bargaining position of an enemy that has both a thermonuclear capability and a strong army.

Today the presence of highly mobile, modernly equipped and organized armies capable of waging either general or limited wars with conventional weapons or a combination of conventional weapons and tactical atomic weapons is the only realistic response to the threat of aggression.

(6) The adoption of career incentives for officers and enlisted men and women to increase the effectiveness of the Army, and improve the morale and esprit of the members of the Army and their families. These include actions relating to:

Troop and family housing.

Medical and dental care of dependents.

High standards of service at reasonable cost in commissaries, laundries, and post exchanges.

Adequate retired pay.

Concurrent travel of heads of families and their dependents to oversea stations.

NO. 1. MAINTENANCE OF A STRONG ARMY

There is a continued threat to world peace which endangers the security and peace of this country; and

The Soviet Union and Communist-dominated countries have made vast improvement in their overall military posture and their preponderant strength is in their modernized army forces;

Our massive retaliatory potential has not deterred the pattern of small wars and limited aggression which can only be met with ground forces;

The defense of the United States is dependent on the Active Army and the citizen soldier of the U.S. Army Reserve and the Army National Guard;

There is not now sufficient personnel to man all elements of existing authorized units to fulfill the Army's responsibilities in accordance with announced roles and missions, with worldwide commitments, maintenance of an effective strategic reserve, and carry out all other vital assigned missions;

I advocate an active army of not less than 1 million; a paid drill strength of not less than 300,000 in the U.S. Army Reserve, and 400,000 in the Army National Guard, both exclusive of all 6-month trainees; the necessary supporting civilian employees and funds for forces of this size.

NO. 2. MODERNIZATION OF THE ARMY

A high percentage of the weapons and equipment currently available to and utilized by the U.S. Army is outmoded;

It is not the desire of any citizen that an American soldier be forced into combat with inferior weapons and equipment;

Our Army must be prepared to resist attack or to fight any type of warfare ranging from brush fire to major engagement;

The U.S. Army must be provided with modernized weapons and equipment at a rate and to an extent which will assure the United States a fighting force, properly armed and equipped for any type of modern warfare.

NO. 3. ARMY MISSILE EMPLOYMENT

The restrictions on the range of Army ballistic missile systems restricts the flexibility and full utilization of the weapons; and

The U.S. Army has demonstrated a superb capability for developing and deploying operational ballistic missile systems in minimum time and at minimum cost; I think that the Secretary of Defense should remove the present range limitations on the Army's use of ballistic missile systems so as to give Army field commanders flexible weapons capable of successfully accomplishing the Army's combat missions.

NO. 4. ARMY AIR DEFENSE SYSTEM

An adequate defense against manned aircraft attack systems continues to be necessary to national security

Defense against enemy ballistic missile attack on the United States is vital to this Nation;

The U.S. Army has demonstrated foresight and has rapidly progressed in the development of the NIKE–ZEUS, the only known ballistic missile defense system potentially capable of countering an enemy missile attack; I believe the continued installation, operation, and development of the NIKE missile air defense system by the U.S. Army is imperative so I feel that the Army should be authorized to proceed with all possible speed in the development, perfection, and production of the NIKE–ZEUS missile system so critical to this country's security.

NO. 5. AIRLIFT FOR THE ARMY

The Strategic Army Corps has a unique capability to deal with the challenge of limited war by bringing to bear its trained manpower and graduated firepower.

Promptness of reaction is a primary requirement for coping with limited war and prompt action by the Strategic Army Corps is inhibited by the lack of strategic airlift to transport Army combat elements from the United States to an area of threat or action with sufficient rapidity and to support such a force by air until surface transportation can take over the task of supply.

This dearth of adequate airlift to move and support the Strategic Army Corps is crippling to the Nation's ability to respond promptly and forcefully to a threatened or actual limited war situation;

I urge that the U.S. Army must be provided with sufficient transport aircraft on top priority to permit the movement of at least one-half of the Strategic Army Corps and full logistical support thereof.

NO. 6 REMOVAL OF WEIGHT AND RANGE LIMITATIONS ON ARMY AIRCRAFT

Army aviation offers a tremendous potential in mobility and firepower so essential in successful ground combat and there exists an urgent need for full development and exploitation of highly versatile aircraft for use within the Army's area of responsibility on the battlefields of the future.

The development of such aircraft which can live, work, and hide on the modern battlefield in its multiple role of transport, command, communications surveillance, and weapons platform does not duplicate or conflict with the Air Force.

Certain weight and range restrictions deny the Army the full exploitation, research and use of aircraft which will vastly improve its capability to carry out its mission and no service should be denied the equipment it needs to further the accomplishments of its mission.

The depth of the battlefield in modern warfare is such that present weight and range limitations on aircraft prevent the Army from attaining its full effectiveness; thus the weight and range limitations on Army aircraft must be lifted so as to permit exploitation of its versatility and mobility to the full advantage of its capabilities in support of the Army's role.

NO. 7 REVITALIZED ARMY ROTC PROGRAM

The major source of officers for all components of the Army is from the Reserve Officers Training Corps, and the ROTC program is vital to the continued availability of high caliber officers to provide for the qualitative leadership requirements of the Army.

The training under the ROTC program in high schools and colleges is essential to national defense and also contributes greatly to our national welfare and to our young men in the development of leadership, citizenship, and patriotism.

The continued effectiveness and value of the ROTC program requires that it be kept aligned with the growing population and consequent economic burden on high schools and colleges. It is essential that the Congress and Department of Defense expand and strengthen the high school and college ROTC program and further recommend increased Federal funding and manpower support to this program.

NO. 8 ADJUSTMENT OF RETIRED PAY

Public Law 85–422, approved May 20, 1958, amended the Career Compensation Act of 1949 to provide a general increase in pay for military personnel, but provided an increase in compensation of only 6 percent for those persons who were retired prior to the effective date of the act.

A member of the military service should have a right to consider adequate retired pay as a normal expectancy based upon long and honorable service, and many of those who are just beginning their Army careers maintain that as a career incentive the same standard for compensation of retirement pay shall be applied to all without regard to date of retirement.

I will support proper proposals to equalize the pay of military personnel who retired prior to June 1, 1958, with those retired after that date, and the restoration of the traditional relationship between the pay of active and retired military personnel so that full confidence in the retirement system may be maintained by those now serving in the active service.

ADEQUACY OF FISCAL YEAR 1961 BUDGET

Mr. MAHON. Mr. Ford?

Mr. FORD. Mr. Secretary and General Lemnitzer, last year on January 29, 1959, General Taylor appeared before the committee in reference to the fiscal 1960 hearings. On page 377 of the policy state-

ments in part 1 of the hearings I discussed with him the fiscal 1960 budget. In those hearings I made this statement on page 377, speaking to General Taylor:

As I recall your testimony, you indicated you were supporting the budget overall as a member of the Joint Chiefs of Staff.

General Taylor said,

That is right.

I followed with this question:

Although you have some reservations about the allocation of funds and the directions of certain programs in our overall military picture.

General Taylor replied—

That is right.

General Lemnitzer, what is your view in reference to the fiscal 1961 budget? Do you support the overall amount as adequate for our national security?

General LEMNITZER. I support the budget, Mr. Ford. Otherwise, I would not deserve to hold my present position.

When you asked about adequacy, you have heard our feelings regarding the NIKE-ZEUS, for example, which is not included. So there are certain things that are not in the budget which I would prefer to have in it.

I recognize the problem of the authorities who have to put together the total program, and the limitations which they face. I recognize the problem. So I am not saying that the overall is adequate or not. I do not think I am in position to indicate that. There are certain things which I would like to have in the budget, there are certain things in the Army's program I would like to see increased. I recognize the nature of the problem but I accept the decisions which have been made on it and I support the President's budget.

Mr. FORD. Are you mostly concerned with the allocations of a $41 billion military budget for fiscal 1961?

General LEMNITZER. Yes.

We have been discussing with Mr. Flood some of the problems with which we are confronted in stretching our resources of men and materiel. I think that is indicative of our attitude in this regard. I want to make it clear I am not complaining about it. I note in the press that they constantly use the word "complaining." I am not.

Mr. FORD. Following those questions that I just read, I asked this question:

One of the reservations you apparently had was that in your judgment we had an excess of deterrent or retaliatory weapons and weapons systems, that we were overdoing that aspect of our defense picture. Is that a correct interpretation of what you said this morning?

General Taylor replied,

That is correct.

What is your impression General Lemnitzer of our retaliatory or deterrent capability in the fiscal 1961 budget? Are we overdoing that aspect of our defense program?

General LEMNITZER. During the past several years, this has been the Army's position: That there was undue concentration on the retalia-

tory aspect and we were not devoting enough of our resources to our forces to deal with other types of military aggression.

The situation is changing somewhat in that respect, and we are now talking 1961, which means the programs that are budgeted for 1961, which really involve programs that will be implemented in fiscal years 1961, 1962, and 1963. In some cases the equipment, as we discussed in the case of the carrier, will not be available for operational deployment until 1965.

Also, within the Joint Chiefs of Staff, we have made a thorough review in the last few months of what is regarded as an adequate retaliatory effort. You asked the question yesterday regarding the amount that is going into ICBM's. I would say the situation is somewhat different from what you described, or what has been brought out in discussions with General Taylor.

Insofar as retaliatory forces are concerned we are moving out of the era of the manned bomber, which is presently being phased out, and into the era of the ICBM.

As I pointed out yesterday, I am generally in accord with the amounts that are going into the ICBM program for fiscal 1961.

Mr. FORD. Yesterday you used a phrase that I think is a very good phrase to use in discussing the capability of our deterrent or retaliatory forces. I think the phrase was, "Invulnerable retaliatory capability."

General LEMNITZER. That is correct.

Mr. FORD. Do we have that today?

General LEMNITZER. No, we do not. I consider that an invulnerable retaliatory capability is absolutely essential to our security. If any would-be aggressor is thinking about launching a surprise attack and thinks that our retaliatory effort is vulnerable, he may well be tempted to attempt to eliminate it by a surprise attack—that would encourage that kind of thinking.

I regard mobility as being the best means of having an invulnerable retaliatory capability. We have applied that concept in the Army on the battlefield for years. This type of invulnerability is the kind that I primarily favor.

I am not opposed, however, to some hardened bases until we get the requisite type of mobile retaliatory capability. Accordingly, I do regard an invulnerable retaliatory capability as essential to our security.

Mr. FORD. How vulnerable are we?

General LEMNITZER. That is a difficult question to answer categorically. This committee knows, although it is not known publicly, that we are only presently moving into a program of building hardened missile sites. I think there should be a definite limit on this type of site because it is very costly and I consider that mobility gives us a better degree of invulnerability than hardened sites. However, we do not yet have the kinds of missiles in the ICBM category that enable us to be mobile.

Our retaliatory capability at the present time—as of now, January 1960—is primarily in the Strategic Air Command. Certainly, this is not completely invulnerable at the present time. Nor do I think it has to be at the present time. I would like to make that point clear. I think the primary Soviet capability at the present time also rests in manned bombers.

Mr. FORD. When reading and rereading the testimony given by all of the members of the Joint Chiefs of Staff last year before this committee, including that of General Taylor, Admiral Burke, General Pate, all indicated that we had an overkill capability in the strategic retaliatory area.

General White, Chief of Staff of the Air Force, said we had enough.

General Taylor's testimony on pages 378 and 379 of the hearings last year would certainly indicate that we had more than enough at that time and as programed. I do not know how this testimony coincides with what he said in his recent book. Do you think the situation has changed significantly in our overall deterrent retaliatory forces, not just the missile capabilities?

General LEMNITZER. I think the situation is changing. I say that because our Intelligence indications are that the Soviet Union is developing a highly effective surface-to-air missile defense along the pattern of our NIKE-HERCULES missile defense.

Therefore, I believe there is a change in that regard. This injects into the whole problem an increased attrition factor that would result if we had to go in and strike some of the targets we are talking about.

This question has to be taken in its entirety—what our overall retaliatory capability is. If you are talking about the number of nuclear weapons we have available, I would say we do have more than enough weapons if every one of them would be put on a target. The uncertainty in the area of opinion here concerns getting those missiles onto targets with manned bombers. For 1961, however, we are moving out of the manned bomber field into the missile field, which does basically change this problem.

Mr. FORD. Mr. Secretary, what is your view on the overall adequacy of the Defense budget and the allocations of it between the respective services?

Secretary BRUCKER. As to the overall adequacy of it, while I am not a member of the Joint Chiefs of Staff and do not function day to day in that zone, I do, of course, have the benefit of the advice from the Chief of Staff and other people in the Army. There is not any sure way of knowing whether the full amount of $41 billion is sufficient for the overall military. I do not know that anybody is smart enough to answer that question.

It is my very definite feeling from repeated year-by-year discussions on the Army budget in connection with the others that the allocations to the Army have not been of the amount that ought to have been made to it on the basis of its needs and roles and missions.

I have the feeling that the massive retaliatory strike has been an obsession for years. As a matter of fact, some of the statements that were made in connection with discussions we had on the Army budget, if they were revealed on the record here now, after these 3 or 4 years after they happened, would simply amaze you. There was a feeling that the Army was not necessary. It was not necessary to the point where decisions were based upon that theory. Year after year money was taken out of our budget after you granted it. I mean by that the administration took it out. You had granted it. The money was taken out to the tune of a couple hundred million dollars a year and moved over to the other services on the ground that the Army did not

need it even after we had demonstrated the need to you and you had granted the money to us.

So I approach this, I suppose—and I hope I am not a little too partisan in the Army, I grant that I am—I approach it on the basis that when money has been subtracted after the appropriation has been made and the fiscal year started, year by year and each year, and after the Congress has decided what it should be, I think my answer is that the allocation has not been upon the basis that I believe it should have been made.

Mr. FORD. Just so the record is clear, I think it would be helpful if you would identify or specify those amounts that were subtracted from the Army appropriation and show where they have been placed by the Defense Department or others. Do it just for the record.

Secretary BRUCKER. If you would permit me——

Mr. FORD. This is out of my time, but it should be in the record because you have mentioned it and I think the committee ought to know.

(The information to be supplied follows:)

(*a*) Each year since the termination of war in Korea in 1953, adjustments made in funds available to the Army have assisted in easing the financial problems of the Department of Defense. At the end of fiscal year 1954, due primarily to the increased appropriations provided during the conflict in Korea, the Army's financial position included large unobligated balances. The procurement appropriation alone carried an unobligated amount of $5.343 billion. Consequently, in the years immediately following fiscal year 1954, the Army was able to finance its procurement program in part from these carryover funds, thereby substantially decreasing requirements for new obligational authority requested for the "Procurement and production" appropriation in fiscal year 1955, fiscal year 1956, and fiscal year 1957. In addition, $822 million of the "Procurement and production" appropriation balance was transferred to other appropriations, including $255 million to the U.S. Air Force construction account. Another $500 million was rescinded.

(*b*) The situation with respect to Army expenditures during the same period was somewhat analogous to that prevailing for new obligational authority. By drawing down stock inventories built up during the conflict in Korea, $2.569 billion in cash was returned to the Department of Defense and/or the U.S. Treasury by the Army stock fund, thus reducing Army net expenditures by the amounts returned. These returns reached a peak of approximately $700 million in fiscal year 1956 and have declined sharply since.

(*c*) In fiscal year 1958 total estimated net expenditures for the Army, as shown in the President's budget, were $9.170 billion. On July 17, 1957, about 2 weeks after the start of fiscal year 1958, the Army was informed at an Armed Forces Policy Council meeting that expenditures for fiscal year 1958 must be held to a total of $8.950 billion and that this lower amount should be considered a ceiling. Thus, in fiscal year 1958 the Army expenditure ceiling was reduced by $220 million.

(*d*) In fiscal year 1959, a major curtailment in the "Procurement" appropriation was made in November 1958, well after the start of the fiscal year. This curtailment took the form of a directed carryover of $210 million of Army funds from fiscal year 1959 to be held as an asset against the fiscal year 1960 program.

(*e*) The Congress in acting upon the fiscal year 1960 appropriation bill, appropriated $382.6 million more for Army procurement of equipment and missiles than had been recommended in the President's budget. However, the Army will only realize an actual increase over the President's budget of $43.4 million for the fiscal year. This is because higher authority has placed in reserve and will not release to the Army $175 million (of which $137 million represents NIKE-ZEUS) of the $382.6 and because $164.2 of the $382.6 million was required to cover a deficiency in the Army's procurement appropriation. This deficiency resulted from fiscal procedures imposed by higher authority which the Army has always opposed and which since have been rescinded as a result of the Army's continued insistence in the matter.

NIKE-ZEUS FUNDING PROGRAM

Mr. FORD. We spent a good bit of time yesterday on the NIKE-ZEUS funding program. I am still not clear precisely what has been made available, what has been spent. So if we could start fresh, I would appreciate a step-by-step recitation of the money that has been made available, the money that has been spent on a year-to-year basis. What was the first year that we made money available and how much?

Secretary BRUCKER. You want it in the form of a statement so it is on the record?

Mr. FORD. If it can be done quickly and clearly without a great deal of comment, I think we could do it right here and now.

Mr. SHEPPARD. Will the gentleman yield?

Mr. FORD. Yes.

Mr. SHEPPARD. Would the gentleman object to confining expenditure to the appropriation as indicated, expenditure, or to the money that was released for expendable purposes? There is a difference.

Mr. FORD. I want how much we made available in the various categories—R. & D. or otherwise—each year, how much was so expended, and if there are any qualifying statements, that is fine. At present I do not think the record is clear.

Mr. SHEPPARD. Neither am I.

Mr. FORD. If we could do it step by step, one figure after another, I think it would be helpful. The first year how much and where.

Secretary BRUCKER. Fiscal 1958, at that time there were direct obligations totaling $55 million.

Mr. FORD. What category, what account?

Secretary BRUCKER. I will break that down. Procurement of Equipment and Missiles, Army, direct obligations, $34.1 million; R.D.T. & E., $19.8 million; MCA, $1.1 million; total direct obligations for 1958, adding those up, $55 million.

Net expenditures for that year. Procurement of Equipment and Missiles, Army, $10.6 million; R.D.T. & E., net expenditures, $21.1 million; MCA, net expenditures, $0.2 million.

Total net expenditures for that fiscal year, 1958 and prior, $31.9 million.

Mr. FORD. May I just say this. In the R. & D. picture for new obligational authority in fiscal 1958, $19.8 million was made available and you expended $21.1 million.

Secretary BRUCKER. This is for 1958 and prior. That brings the prior into the 1958, so I am giving you that as of that column, 1958 and prior.

Mr. FORD. Then, for the record, some place you have to show how much you had available in obligational authority in prior years.

Secretary BRUCKER. We can do that.

Mr. FORD. How much is it?

General TRAUB. I do not have it here.

General WOOD. $12.2 million in prior years, of which $3.2 million was in 1956 and $9 million in 1957. R.D.T. & E. only. No other appropriation in those 2 years.

Mr. FORD. How much for 1956?

General WOOD. $3.2 million.

Mr. FORD. 1957?

General WOOD. $9 million, even.

Mr. FORD. That explains the difference between new obligational authority——

Mr. FLOOD. That was all R.D.T. & E. in 1956 and 1957?

General WOOD. Yes, sir.

Mr. FORD. 1959?

Secretary BRUCKER. For 1959, I will break it down again. Procurement of Equipment and Missiles, Army, direct obligations, $163.6 million; R.D.T. & E. direct obligations, $35 million; MCA, $12 million; total direct obligations, $210.6 million.

Now I will give you the net expenditures. Procurement of Equipment and Missiles, Army, $67.6 million; R.D.T. & E., net expenditures, $21.6 million; MCA, net expenditures, $3.2 million; total net expenditures, $92.4 million.

UNOBLIGATED BALANCES OF NIKE-ZEUS PROGRAM FUNDS

Mr. FORD. I did not ask for it originally, but I think it would be helpful. Could you show the unobligated amount and the unexpended amount in each of these accounts at the end of the fiscal year?

General TRAUB. We do not have them available.

Mr. FORD. Please supply them for the record.

(The information to be supplied follows:)

NIKE-ZEUS unobligated funds

[Millions of dollars]

	Unobligated forwarded	Appropriated	Obligated	Unobligated, year end
Fiscal year 1959:				
PEMA	0	172.3	163.6	
		(130.1)		
		([1] 42.2)		
R.D.T. & E	0	39.5	35.0	
		24.0		
		([1] 15.5)		
MCA	0	([3] 30.9)	12.0	
Total	0	242.7	210.6	
Fiscal year 1960:				
PEMA	8.7	137.0	0	
R.D.T. & E	4.5	239.0	237.8	
MCA	7.9	61.0	60.0	
Total	21.1	437.0	297.8	
Fiscal year 1961:				
PEMA	145.7	0	0	145.7
R.D.T. & E	5.7	287.0	287.0	5.7
MCA	8.9	15.0	15.0	[3] 8.9
Total	160.3	302.0	302.0	160.3

[1] Transfer from ARPA.
[2] $11 million carried into fiscal year 1960 appropriation of $61 million validated by Congress for use in Pacific Missile Range instead of Atlantic Missile Range.
[3] Required reservation to fund government and supervisory costs, and later direct obligations to completion of projects.

NIKE-ZEUS unobligated funds

[Millions of dollars]

	Unexpended forwarded	Appropriated	Expended	Unexpended, year end
Fiscal year 1959:				
PEMA	0	172.3	67.6	
		(130.1)		
		([1] 42.2)		
R.D.T. & E	0	39.5	21.6	
		(24.0)		
		([1] 15.5)		
MCA	0	30.9	3.2	
Total		242.7	92.4	
Fiscal year 1960:				
PEMA	104.7	137.0	86.0	
R.D.T. & E	17.9	239.0	204.0	
MCA	27.7	61.0	21.1	
Total	150.3	437.0	311.1	
Fiscal year 1961:				
PEMA	155.7	0	24.0	131.7
R.D.T. & E	52.9	287.0	253.0	86.9
MCA	67.6	15.0	47.2	35.4
Total	276.2	302.0	324.2	254.0

[1] Tranfer from ARPA.

Mr. FORD. 1960.

Secretary BRUCKER. 1960, direct obligations, Procurement of Equipment and Missiles, Army zero. R.D.T. & E., direct obligations, $237.8 million. MCA, direct obligations, $60 million. Total direct obligations, $297.8 million.

Net expenditures, Procurement of Equipment and Missiles, Army, $86 million. R.D.T. & E., $204 million. MCA, $21.1 million. Total net expenditures, $311.1 million.

The program for 1961, these are estimated, of course. Procurement of Equipment and Missiles, Army, direct obligations, zero. R.D.T. & E., $287 million. MCA, direct obligations, $15 million. Direct obligations total, $302 million.

Now for the net expenditures. Procurement of Equipment and Missiles, Army, net expenditures, $24 million. R.D.T. & E., net expenditures, $253 million. MCA, net expenditures, $47.2 million. Total net expenditures, $324.2 million. That is the estimate for 1961.

Mr. FORD. You may not have the figure here, but it should be included in the record, the total amount that has been made available from the inception to what you are planning for fiscal 1961. Do the same also for expenditures. If you have the information, fine.

General TRAUB. We have it all except one element.

Mr. FORD. When you say direct obligations, are you in fact saying that is what was included in the appropriations?

General TRAUB. No, sir; we are not. That which was contracted for, actually obligated during a particular year.

Mr. FORD. Then I suspect for the benefit of the record we should have three columns: that which was made available each fiscal year in each account on the basis of the program submitted to the Congress for this project, then also the direct obligations in each account, and also the expenditures. We have recited this information. Let us have it set up in tabular form so that it is very easily identifiable.

(The information to be supplied follows:)

Nike-Zeus

[Millions of dollars]

	Appropriated	Direct obligations	Expenditures
Fiscal year 1958 and prior:			
PEMA	$34.1	$34.1	$10.6
R.D.T. & E	32.0	32.0	21.1
MCA	1.1	1.1	.2
Total	67.2	67.2	31.9
Fiscal year 1959:			
PEMA	[1] 172.3	163.6	67.6
R.D.T. & E	[2] 39.5	35.0	21.6
MCA	30.9	12.0	3.2
Total	242.7	210.6	92.4
Fiscal year 1960:			
PEMA	137.0	0	86.0
R.D.T. & E	239.0	237.8	204.0
MCA	61.0	60.0	21.1
Total	437.0	297.8	311.1
Fiscal year 1961:			
PEMA	0	0	24.0
R.D.T. & E	287.0	287.0	253.0
MCA	15.0	15.0	47.2
Total	302.0	302.0	324.2

[1] Includes $42,000,000 transferred from ARPA.
[2] Includes $15,500,000 transferred from ARPA.
[3] $11 million carried into fiscal year 1960 appropriation of $61 million validated by Congress for use in Pacific Missile Range instead of Atlantic Missile Range.

Mr. FORD. In further reference to NIKE–ZEUS, I believe last year it was testified that for fiscal 1960 the Army had requested $1,003 million for procurement of equipment and missiles for the NIKE–ZEUS program. This was so stated on page 408 of the committee hearings last year.

Secretary BRUCKER. The Army recommended, November 12, 1958, $1,003 million for fiscal 1960, R.D.T. & E., procurement of equipment and missiles, Army, and MCA.

Mr. FORD. That recommendation was not approved by the Defense Department nor was it included in the budget. It was not included in the appropriation bill that was approved by the Congress?

Secretary BRUCKER. That is correct.

Mr. FORD. What, if anything, did the Army recommend for fiscal 1961 different from the program that is now before us in the case of NIKE–ZEUS?

Secretary BRUCKER. In connection with the filing of our basic and addendum budget, on September 1 we asked at that time for fund requirements for NIKE–ZEUS production and deployment, for procurement of equipment and missiles, Army, $805 million. For MCA, $389 million.

Mr. FORD. In place of the $15 million that is now before the Congress in the MCA area?

Secretary BRUCKER. Yes, $15 million was the MCA that was put in there.

Mr. FORD. In other words, the Army asked for $1,179 million more for the NIKE–ZEUS program in fiscal 1961 over and above the program before us.

Secretary BRUCKER. I thought we asked for $1.194 billion total.

General WOOD. $1.2 billion.

Mr. FORD. That is correct. You asked for $805 million in "Procurement of equipment and missiles"; $389 million for MCA.

Secretary BRUCKER. That is right.

Mr. FORD. However, you must subtract $15 million from that total because there is $15 million in the program before us.

Secretary BRUCKER. That is right, there is $15 million. Your question was: What was the net difference?

Mr. FORD. That is correct.

Secretary BRUCKER. $15 million less. In other words, $1,179 million difference.

Mr. FORD. Some time yesterday I thought I heard the figure used that the Army's objective figure in fiscal 1961 was $739 million for NIKE-ZEUS. Was I incorrect or correct in what I thought I heard?

General LEMNITZER. That was the amount over and above the submission of the basic and the addendum budget that was included in our objective budget. In other words, our basic and addendum was a figure—I do not have it broken out here—but over and above that, we felt that for the deployment of NIKE-ZEUS we needed $739 million which we put in our objective budget.

Mr. FORD. I am not clear, will you please clear it up for the record.

General LEMNITZER. All three of them—basic, the addendum, and this $739 million—that would add up to the amount we thought was required for the deployment of NIKE-ZEUS.

Mr. FORD. In other words, you would take the $302 million and subtract that from the $1.179 billion and that figure would come out about $739 million.

Secretary BRUCKER. Yes.

Mr. ANDREWS. $877 million.

General LEMNITZER. The figure I had provided for deployment of NIKE-ZEUS probably includes both MCA and PEMA.

Mr. ANDREWS. Will the gentleman yield?

Mr. FORD. Yes.

Mr. ANDREWS. The figure you gave us, Mr. Secretary, for the total amount in this budget for the ZEUS program was $302 million for 1961.

Secretary BRUCKER. $287 million for R.D.T. & E. and $15 million for MCA.

Mr. ANDREWS. If you originally requested $1,179 million, the $302 million was part of that, I assume.

Secretary BRUCKER. $287 million would, of course, be the R.D.T. & E. and the $15 million would be MCA money, which is part of what we asked.

Mr. ANDREWS. Your original request for the ZEUS program was $1.179 billion?

Secretary BRUCKER. $1.194 billion was the original request we made.
Mr. ANDREWS. So your ZEUS program was cut to $877 million?
Secretary BRUCKER. That is right.
(The following summary was later provided for the record:)

The Department of the Army request for NIKE-ZEUS and the amounts included in the fiscal year 1961 budget, are reflected in the following data in terms of new obligational authority:

[In millions]

Appropriation	Requested in the Army submission to OSD	Approved by OSD and included in the budget	Difference
R.D.T. & E	$328	$287	−$41
MCA (to support R.D.T. & E.)	15	15	
PEMA (for production)	805		−805
MCA (for deployment as a result of production)	389		−389
Total	1,537	302	−1,235

UTILIZATION OF MILITARY MANPOWER

Mr. FORD. As both Secretary Brucker and General Lemnitzer know, I have been concerned about personnel problems for some time. The Army has done a fine job in improving its reenlistment rate. You have done a spectacular job, I think, in handling your court-martial and disciplinary difficulties. The medical people can speak with pride about the better job they are doing in keeping Army personnel on the job rather than in the hospital.

The Congress has been helpful in enacting legislation so that you could keep out or get rid of what the Secretary calls inept people. It has been possible for the Army because of legislation and your program to relieve the Active Army of certain responsibilities such as the effort by the Army National Guard to take over antiaircraft sites, the NIKE-HERCULES, rather than the old 90 millimeter or any of the others.

The thing that bothers me this year, as it has in the past, is that I do not see concretely how all these benefits are reflected in a payoff in fewer men overall and equal or greater number of men in combat divisions.

General LEMNITZER. I think it can be stated in these terms. First, I believe we have a higher degree of training and a higher quality within our units than we had when the conditions prevailed about which we are talking.

The reasons we have not been able to fill out units and provide more combat and service support, along the lines of communications, is that we have had to take on additional commitments, Mr. Ford. To cite a few—merely a few—we have an important additional requirement, running into three or four thousand for this fiscal year, in Europe. We are using some of the people we have saved by other measures and we are using them to take on that added commitment.

We have a much larger Military Assistance Advisory Group in Iran and in Turkey, which is a recent requirement. These are some of them.

Mr. FORD. On the other hand, it is true to say you have had some changes the other way. For example, although it has not materialized

yet, according to one of the statements before us, with the withdrawal of our forces from Iceland you will get X number of people available for other assignments.

General LEMNITZER. This is true, and we are using them in NATO. We are regrouping them to assume these added responsibilities.

Mr. FORD. I am not trying to unfairly compare nor am I seeking to be critical, but my nature is I like to see something concrete when I buy something. Now, we have had a decrease in the overall strength of the Army from 900,000 to 870,000. It was higher than 900,000 a few years ago.

At the same time that these personnel figures have gone down, we have had an increase in the cost in the military pay account. Just so the record is clear on this, I would like to have for the last 3 or 4 fiscal years laid out the amount of money made available by the Congress in the military pay account, each fiscal year, and then on the other side the military strengths.

I subscribe to the greater expenditure provided—and only provided—we get better people to do the job more adequately.

(The following information was supplied:)

Appropriations, military personnel, Army, and military strengths excluding reimbursables

Fiscal year	Begin strength	End strength	Appropriations direct obligations (billion)
1957	1,024,900	997,100	$3.594
1958	997,100	898,200	[1] 3.513
1959	898,200	861,300	[2] 3.551
1960	861,300	870,000	3.514

[1] Does not include provisions of Public Law 85-422 which granted the pay raise effective June 1, 1958.
[2] $45,000,000 of this amount was appropriated for an end strength of 900,000. The higher strength (900,000) was not authorized and the extra money was not used.

General LEMNITZER. This we are doing; we are getting better people—more experienced people who are staying in the service. Therefore, less effort is required for training and more effort is available out on the line, so to speak.

Mr. FORD. The thing that impressed me with the Marine Corps was last year they said they had to take out 6 battalion landing teams when they were cut from 200,000 to 175,000. This year General Shoup says that we are not getting an increase in strength but we are going to be able to put back two and maybe more of those battalion landing teams. To me, that is something I can put my fingers on; it impresses me. Can you do something like that or can you tell the committee something along this line?

General LEMNITZER. I have mentioned two battle groups, which is a lot more than two battalion landing teams, in the rearrangement which I have just discussed.

In addition, our additions in Europe will be the equivalent of two battle groups. There we are getting a comparable increase. As a matter of fact, we are getting more than a comparable increase in terms of battle groups.

Mr. FORD. Why does not the Army come up and tell us that right off the bat? I think that is impressive.

General LEMNITZER. I attempted to cover it in a general way in my statement. I could and probably should, have made it sharper.

Mr. FORD. Will you put in the record the specifics of this?

General LEMNITZER. Yes, I will.

Mr. FORD. I think it is an excellent illustration of what we want done.

General LEMNITZER. Very well.

(The information to be supplied follows:)

During the period end fiscal year 1959 to end fiscal year 1961, a period during which the Army's authorized strength will have remained level at 870,000, the following overall additional combat units will have been created: 2 infantry battle groups (one organic to a division); 1 medium missile command; and 1 air defense battalion.

In addition to these unit increases, the Army will devote the equivalent of two infantry battle groups in support of NATO. While not an increase in total numbers of units, the Army has created 72 modern missile units through conversion of existing conventional artillery units.

REENLISTMENT RATES

Mr. FORD. In the hearings last year a number of charts and considerable material was included in reference to the trend in reenlistment rates, the improvements in your disciplinary problems. Either you, Mr. Secretary, or General Lemnitzer gave some excellent examples yesterday—not in the prepared statement but in an interpolation during the statement. Let us put that in the record.

Secretary BRUCKER. Yes.

Mr. FORD. In other words, what I want is really an extension of all the chart material we have asked for in the past, which I think covers most of these problems I have discussed.

Secretary BRUCKER. We can check the charts and extend them.

(The information to be supplied follows:)

Reenlistment rates, all components as percent of eligibles (reenlistments within 90 days), fiscal years 1958, 1959, and 1960

FISCAL YEAR 1958

Month	Overall	Regular Army	Selective service	Reserve components
July	32.3	45.1	4.6	45.8
August	28.7	41.6	3.4	41.4
September	27.8	43.3	3.2	34.4
October	32.5	51.1	3.9	33.5
November	37.2	53.4	4.8	35.0
December	33.3	44.9	4.3	34.4
January	28.6	35.2	4.4	33.0
February	33.3	54.4	3.7	26.4
March	43.1	60.8	8.4	31.1
April	34.3	54.7	5.5	31.9
May	32.3	56.4	6.1	27.2
June	30.8	52.4	5.5	24.7
Average	32.3	48.1	4.7	32.0

FISCAL YEAR 1959

July	29.8	52.9	5.0	19.6
August	33.0	57.2	5.7	21.1
September	26.3	53.5	5.1	12.8
October	25.8	52.7	4.4	14.7
November	24.6	54.2	4.2	22.5
December	23.7	52.9	4.4	17.3
January	20.2	46.7	3.5	10.9
February	21.6	50.5	4.9	10.4
March	23.8	54.7	5.1	13.4
April	24.1	56.8	5.2	12.2
May	25.3	52.5	6.7	12.7
June	26.5	44.4	8.8	11.4
Average	25.4	52.4	5.1	14.4

FISCAL YEAR 1960

July	27.1	45.1	8.5	10.9
August	27.2	50.4	8.0	7.9
September	[1] 27.2	46.1	8.7	8.1
October	[1] 36.6	51.5	14.0	[1] 20.9
November	[1] 42.1	60.7	12.3	[1] 43.8
December				
January				
February				
March				
April				
May				
June				
Average	[1] 31.0	50.3	9.8	[1] 13.1

[1] Preliminary.

1st term Regular Army reenlistment rates [1]

Period:	Percent
July 1954 to June 1955	38.9
July 1955 to June 1956	28.2
July 1956 to June 1957	18.9
July 1957	14.0
August	13.8
September	12.8
October	15.6
November	17.6
December	14.3
January 1958	9.1
February	20.3
March	28.4
April	24.3
May	25.2
June	28.6
July	23.1

Period—Continued	Percent
August	24.1
September	22.4
October	23.2
November	23.6
December	20.4
January 1959	15.5
February	18.9
March	22.5
April	25.5
May	21.9
June	18.3
July	16.8
August	20.3
September	16.3
October	21.6
November	32.2

[1] These rates apply only to those Regular Army 1st-term separatees (personnel completing their initial Regular Army enlistment) eligible for reenlistment.

Reenlistment rates of the services [1]

	Army [2]	Navy [3]	Marine Corps [3]	Air Force [3]
Fiscal year 1957	24.8 (49.6)	44.9	29.1	49.4
Fiscal year 1958	32.3 (48.1)	43.7	39.8	54.8
Fiscal year 1959	25.4 (52.4)	34.3	31.9	61.5

[1] In percent reflecting that number of reenlistments as compared with that number of separatees eligible for reenlistment.
[2] Army rate includes Regulars, inductees, and reservists on active duty. Figures in parentheses represent Regular Army reenlistment rate.
[3] Navy, Marine, and Air Force rates include Regulars only.

No prior service enlistments (fiscal years 1959, 1960, and 1961)

Month	Fiscal year 1959		Fiscal year 1960		Fiscal year 1961 estimate
	Estimate	Actual	Estimate	Actual [1]	
July	10,300	10,294	9,200	9,189	8,500
August	11,900	11,960	9,000	8,975	8,400
September	12,900	12,890	9,400	9,434	8,300
October	12,300	12,294	8,700	8,625	8,300
November	9,300	9,290	6,100	6,812	6,300
December	7,900	7,865	4,800	6,043	4,800
January	9,800	9,847	8,300		8,800
February	8,900	8,853	7,400		7,400
March	7,400	7,353	6,400		6,400
April	6,200	6,324	5,600		5,600
May	5,100	5,289	5,500		5,500
June	10,800	10,839	8,900		8,900
Total	112,800	113,098	89,300	49,078	87,200

[1] Preliminary.

NOTE.—Percentage initial male enlistments enlisting for a 3-year term:

	Percent
Fiscal year 1958	98.3
Fiscal year 1959	99.3
Fiscal year 1960 (1st quarter, preliminary)	99.8

COURTS-MARTIAL, AWOL'S AND PRISONERS

Army courts-martial rates per 1,000

	Fiscal year 1957		Fiscal year 1958		Fiscal year 1959	
	Number	Rate	Number	Rate	Number	Rate
Courts-martial, total	92,325	92.0	77,048	82.1	58,887	66.2
Summary	51,978	51.8	45,156	48.1	36,224	40.7
Special	34,761	34.6	28,125	30.0	20,287	22.8
General	5,586	5.6	3,767	4.0	2,376	2.7

AWOL rate per thousand

	Number	Rate
Fiscal year 1957	50,930	50.7
Fiscal year 1958	43,034	45.8
Fiscal year 1959	35,075	39.5

PRISONER STATISTICS

Since the post-Korea peak in 1955 the prisoner population has been reduced by 85 percent. The only disciplinary barracks now operated by the Army is at Fort Leavenworth, Kans. The installation at Lompoc, Calif., fourth disciplinary barracks to be closed, has been released to the Department of Justice on a revocable permit basis.

The 85 percent reduction in prisoners is in contrast to a drop in Army strength of 23 percent. A major factor has been the emphasis placed on screening prisoners at the stockade level by weeding out those who are not amenable to rehabilitation, and accelerating the return to duty of others by local clemency action.

	Number confined	Rate per 1,000 total Army strength
Army prisoners confined in disciplinary barracks:		
Fiscal year 1957	2,960	3.0
Fiscal year 1958	1,723	1.9
Fiscal year 1959	895	1.0
Prisoners confined in Army stockades:		
Fiscal year 1957	5,310	5.3
Fiscal year 1958	3,384	3.8
Fiscal year 1959	2,838	3.3

Confinement facilities closed.—Continuing efforts are being made to eliminate or consolidate the number of confinement facilities in operation. The following information indicates the progress made to date:

Disciplinary barracks closed.—Fort Gordon, Ga., June 30, 1957; Fort Crowder, Mo., January 31, 1958; New Cumberland, Pa., March 2, 1959; and Lompoc, Calif., July 31, 1959.

Army stockades closed.—1957, 2; 1958, 2; 1959, 11.

CATEGORY IV PERSONNEL

Mr. FORD. I am not sure any chart material in the past has indicated the real benefits you have been able to derive from the legislation which permitted you to handle the mental category IV people. There have been some statements about how many people were let out and how many people were kept out. Let us see if we can refine

it so you can read down the line and say that in fiscal 1960 this was done and in fiscal 1959 this was done. Can you put that material in?

Secretary BRUCKER. Yes, we can.

(The information to be supplied follows:)

It is difficult to measure quantitatively the benefits derived from Public Law 85–564 in terms of improved quality and effectiveness of the Army's personnel, although this is kept under constant review. One good index, however, is the recent decline in prisoner population and incident rates. Between June 30, 1956, and June 30, 1959, the number of prisoners in confinement in U.S. disciplinary barracks decreased from 4,359 to 895. The rate per thousand went down from 4.3 to 1. The rate per thousand of persons tried by general court-martial has declined from 7.2 (fiscal year 1956) to 2.7 (fiscal year 1959). Another good index of improved quality of personnel is the increase in voluntary participation in off-duty training courses. Following institution of the job performance potential program, commanders universally reported significant improvement in behavior patterns of enlisted men, with reduction in the number of a .w.o.l.'s, military and civil offenses, and confinements.

The job performance potential program was initiated on July 23, 1957, for the dual purpose of reducing the strength of the Army without the loss of effective personnel and for maintaining a continuous screening of the draft input. This program was largely suspended on July 29, 1958, after enactment of Public Law 85–564, which permitted the rejection of registrants who, if accepted, would be unable to meet performance standards. The program was not suspended in Puerto Rico due to the preponderance of non-English-speaking registrants who cannot be evaluated until after completion of basic training and language instruction, presently accounting for about 130 separations per month. During fiscal year 1958, a total of 69,600 soldiers of lesser potential were discharged armywide. An additional 8,600 were separated during fiscal year 1959, consisting primarily of trainees who were in the process of evaluation at the time the program was suspended; 2,600 further separations have been effected thus far in fiscal year 1960. All of these men were judged by their commanders, and by testing with the Army classification battery, to be the least effective men in the Army at the time.

It must be understood that the job performance potential program was undertaken administratively on the authority of the Secretary of the Army and is not directly related to Public Law 85–564. The legal effect of that act was to permit modification by the President of induction standards; it did not pertain to the personnel of the Active Army. Those eliminations which have been made under the program were based on the individual's trainability and usability as measured by aptitude tests of the Army classification battery and by observed performance, rather than on his mental group as such. The incidence of untrainability, of course, is higher in mental group IV than in the upper mental groups.

Public Law 85–564 was initially effective in reducing the percentage of mental group IV accessions into the Army through induction, although it appears to have reached its peak and its effect is leveling off. If qualified under current mental standards established under the authority contained in the law, all mental group IV personnel who are presented for induction must be accepted by the Army. The following table shows the Army's experience in mental group IV accessions for fiscal year 1958 (before Public Law 85–564), fiscal year 1959, and for the first half of fiscal year 1960:

Army inductee accessions—Mental group IV

First year	*Percent*
1958	39.5
1959	30.8
1960 (½)	32.5

Since preinduction examination with the Army classification battery under the authority of Public Law 85–564 was initiated in August 1958, the rejection experience among mental group IV personnel for failure to meet the standard of scores at 90 or above on two aptitude areas of the Army classification battery has been quite constant. For fiscal year 1959, of 301,600 total personnel administered preinduction examinations 16,250 were rejected in the "trainability

limited" category—a rate of 5.4 percent. For the first half of fiscal year 1960, 67,156 individuals have been given preinduction examinations, of which 3,524 (5.2 percent) have been classified as "trainability limited."

MODERNIZATION OF EQUIPMENT

Mr. FORD. I am concerned about this modernization problem. It has been fairly well covered, I think, except for one aspect. A statement on page 28 of your prepared text, Mr. Secretary, bothers me considerably. I read the paragraph:

> Last year I pointed out the Army's urgent need for rapid modernization of its major items of equipment. I spoke of a phased modernization program requiring an average annual investment of $2.8 billion. The funds requested in our 1961 budget, although short of this modernization program, will enable the Army to replace with modern equipment most of the items which we will lose during the fiscal year from wear out, obsolescence, and consumption in training.

If I read that statement correctly or if I interpret it correctly, it indicates to me that the program before us actually puts you in a deficit position in fiscal 1961. Is that a correct interpretation of what you are saying?

Secretary BRUCKER. What I tried to say is the element of wear out, obsolescence, and consumption in training would be offset by the amount we have in the procurement budget, but it will leave us just about where we are with regard to the totality of the modernization program.

In other words, we will not have the money for the initial procurement and for the replacement of items with better models.

Mr. FORD. The inference I get is you are going into a deficit position. you say: "With modern equipment most of the items * * *." The inference there is you are not doing as well. Is that true, or did I misinterpret it?

Secretary BRUCKER. With respect to that particular phrase, the Army considers that if we got $1.6 billion for procurement money, that that is the break-even point when we consider the 10 percent consumption, obsolescence, et cetera, transportation cost, and other expense in connection with it. That is the computation we have made over not just last year and this year but over a period of years. I think you are familiar with the formula. We are getting substantially $1.5 billion and this figure is $1.6 billion. I think the point was that we are getting most of the items which we will lose during the fiscal year from wear out, consumption, and obsolescence, $100 million difference. To be precise, I would call attention to that. I think substantially we are where we were a year ago but from the standpoint of initial procurement and the replacement of items with better models and new items never before available, those three of the four types of modernization, we would not have money to go into that. That is what I am trying to say.

Mr. FORD. I notice you use the figure of $2.8 billion for your annual increment for your phased program of modernization.

Secretary BRUCKER. That is right.

Mr. FORD. Back in 1956 for the fiscal 1957 budget, either General Palmer or General Magruder—I cannot remember which—laid out a 14-year program, as I recall.

Secretary BRUCKER. General Magruder.

Mr. FORD. It was for modernization of the Army. He estimated that about $2 billion a year would be adequate to accomplish this objective. Has there been a change in this program?

Secretary BRUCKER. I am not cognizant of any change in the program. The figure of the percentage he gave is the usual Army figure on that subject, but it has been calculated that this phased modernization program would require an average annual investment of $2.8 billion. I think this was the figure we gave you last year also in the 1960 budget.

Mr. FORD. It is about $700 or $800 million more a year than was told us in 1956 for the 1957 budget.

Secretary BRUCKER. You will remember last year General Taylor, and also the year before, estimated we should have $3 billion a year for 5 years to catch up. This is slightly under that figure, $2.8 billion. I think the $3 billion was adjusted to $2.8 billion when support to research and development was transferred from PEMA appropriation to R.D.T. & E. appropriation. I am quite sure before General Magruder went to Korea he concurred in this figure of $2.8 billion. I could ascertain that. The formula is exactly the same as we have used.

Mr. FORD. With the $1.524 billion that is included in the program for fiscal 1961, is it true to say you will buy all modern equipment with that?

Secretary BRUCKER. No, not in the sense of that. The term modern is used in the sense of four types. There is what might be called initial procurement to replace annual losses from inventory due to consumption, wear-out, and obsolescence. Third is new items never before available. No. 4, to replace items with better models of similar items in the system.

Mr. FORD. I asked: Are you buying all modern equipment with whatever funds are made available?

Secretary BRUCKER. When we buy a truck, we buy the model of the up-to-date truck. Certainly, to that extent you would call it modern because it is the latest model of the thing that we buy. But when it comes to other things, we are not buying in the other three categories that I have spoken about here. But when we do get something, we get something that is up-to-date.

Mr. FORD. You mentioned four categories. I do not recall the phrases which were used to describe them. Can you show how much of $1.524 billion will be spent in each category in fiscal 1961?

General LEMNITZER. I have the list right here.

Mr. FORD. Put it in the record.

General LEMNITZER. I might indicate that, in discussing this, we have analyzed the $1.5 billion-plus to find out what could be considered as true modernization. I would say about $1.2 billion of the $1.5 billion would be what we would regard as true modernization.

Mr. FORD. A higher percentage than last year or a lesser percentage?

General LEMNITZER. About the same as last year.

Though we consider any new item entering our inventory to give us a degree of modernization, the following PEMA items and costs in the fiscal year 1961 budget, listed by category, do not give us a major improvement in the equipment for the Army as compared to models used during the Korean war.

Categories 1 and 2 below do not contribute any modernization to our inventory.

Noninventory costs such as "First destination transportation," "Production facilities," "Reimbursement to stock fund," "Defense Atomic Support Agency," and "MAP stockpile" are included as "Category 1." Firepower items such as training ammunition, small arms "National match" type, and "Target drones" are included as "Category 2." Subtotal, $183 million.

Categories 3, 4, and 5, contribute to modernization to the degree that they replace older standard items in the system but do not provide an improved capability.

Mobility items such as the tactical wheeled vehicles, commercial vehicles, trailers, administrative aircraft and floating equipment are in category 3. Electronic and communications equipment such as ground combat radar relay equipment and logistical test and ancillary equipment are included in category 4. Support equipment such as construction equipment are included in category 5. Subtotal, $177,600,000.

Total, $360,600,000.

Mr. FORD. $2.8 billion figure, what would that figure be?

General LEMNITZER. It would be about the same amount: it would be about $2.5 billion that we would consider to be true modernization.

Mr. FORD. If you got $2.8 billion in dollars, how much would be in this category of modern equipment?

General LEMNITZER. About $2.5 billion. In order to understand some of the things that we do not regard as modernizing, I would mention training ammunition. We have to replace that ammunition; and that, in effect, is not what we would regard as putting modernized hardware in the Active Army in our reserve stocks.

Then there is the requirement to use certain funds for production facilities, for setting up production facilities. There are things of that character.

There is also the question of buying and replacing commercial vehicles. We do not regard such expenditures as modernizing in the sense that we are using the term with respect to more modern weapons and equipment in the hands of troops.

Mr. FORD. How much in the Procurement of Equipment and Missiles account did the Army ask for in fiscal 1961?

Mr. MAHON. Ask whom?

Mr. FORD. The Defense Department.

Secretary BRUCKER. The answer to your question, Congressman Ford, is this: On the basis of the basic and addendum budget, under the guidelines, we submitted on September 1, $1.651 billion.

Mr. FORD. In contrast to the amount before us of $1.524 billion?

Secretary BRUCKER. In contrast to the other figure here of $1.337 billion in new obligational authority.

Mr. FORD. Does that figure of $1.651 include the additional amount requested for NIKE-ZEUS in the PEMA account?

Secretary BRUCKER. No; NIKE-ZEUS is in addition to that.

Mr. FORD. That is in addition?

Secretary BRUCKER. That is right.

Mr. FORD. Could you submit for the committee, if not for the record, the list of priorities included in that approximately $300 million difference between what is before us and what you requested.

Secretary BRUCKER. Yes.

Mr. FORD. List it one, two, three, top priority, second priority, third priority.

Secretary BRUCKER. We will submit the information for use of the committee.

PERSHING MISSILE

Mr. FORD. I have heard comment from people I consider responsible that the PERSHING missile program is way behind schedule, that you are having many serious difficulties.

Mr. FLOOD. So have I.

Secretary BRUCKER. I would like to answer that one. There has not been a program that we have watched as carefully month by month as we have the PERSHING missile program. We have what is called an Army Ballistic Missile Committee that meets, which I attend and the Chief of Staff attends. We get a report from Huntsville, including a motion picture if necessary, of some of the progress, documented and brought up to date.

We also have there the representatives of the people who are managing it at Huntsville. We interrogate them and they make their reports. I can say to you the latest reports show it is right up to date and on schedule. There was a slippage of about 4 months a year ago on account of some misunderstanding about the release of funds as between the Department of Defense and the Army. That slippage is expected, even some of that, to be caught up. But as far as the schedule and the date for the testing and the firing, the PERSHING, as far as can be determined, is up to date.

We have also from time to time had people down specially and particularly for the sole reason of checking to see how the management is at the Martin Co., people from both Huntsville and our research and development staff here.

Mr. FORD. Is this the schedule that was set up when the contract was awarded?

Secretary BRUCKER. That is right.

Mr. FORD. This is not a revised schedule?

Secretary BRUCKER. This is the original schedule I am talking to you about because I am very allergic to this business of having revised and revised schedules. There is a slippage of 4 months from that original schedule by reason of this financial flap that occurred about a year or a year and a half ago.

Mr. FORD. What is the operational date for the schedule established in the first place?

General WOOD. The operational date established in the first place was the ——— and we are trying it that way now. We are certain we can make up the 4 months Mr. Brucker mentioned.

Mr. FORD. Is there validity to the suggestion that you could get an operational missile of approximately the same range with a dual capability by exploiting the growth of the REDSTONE? When I say dual capability, I mean high explosive and nuclear warhead.

General WOOD. Let me say, Mr. Ford, that we considered that possibility when we were initiating the PERSHING program. We debated it at some length. It was agreed that we could increase the REDSTONE but it was also agreed that the time required to do so would not have given us a much earlier date, and the state of the art, the advances inherent in the PERSHING, made it a considerably better project.

For example, as you know, the REDSTONE is a large missile based on the fact that its atomic warhead was based on earlier designs which required a much heavier weight and larger size.

The PERSHING will weigh ——— with a solid propellant, loaded and ready to go. It, therefore, contrasts considerably with the liquid propellant problems in the REDSTONE. I am citing this as instances of the overall state of the art advancing.

Mr. FORD. It is fair to state, is it not, that in the last year or more there has been quite a change as far as propellants are concerned? We now are becoming increasingly interested in storables in contrast to solids. Does that make a significant difference in this project?

General WOOD. No, sir, we feel it does not. You are quite right in saying that scientists involved in the propellant business feel it is quite likely we will go, as we have gone, from liquid to solids and perhaps back to storable liquids, but we have not licked all the problems.

General LEMNITZER. The element of size gives a missile such as the PERSHING a great advantage for field use.

Mr. FORD. Does the PERSHING give you the capability of a high explosive warhead of any considerable capability?

General LEMNITZER. Off the record.

(Discussion off the record.)

Mr. FORD. You would get that from a growth capability of the REDSTONE?

General LEMNITZER. Provided whatever growth we obtained was able to lift and propel the same payload as the present REDSTONE.

Mr. FORD. Thank you very much.

Mr. MAHON. We will assume the hearing at 1:30.

Mr. FLOOD. The hour of 1:30 having arrived, Mr. Laird.

Mr. LAIRD. Thank you, Mr. Chairman.

ADEQUACY OF FISCAL YEAR 1961 BUDGET

Mr. Secretary, in the discussions we have been having in the past few days with you and the Chief of Staff, I have noted in your testimony a certain underlying feeling that you have serious reservations about this budget; am I in error?

Secretary BRUCKER. I have concern about the budget with respect to the matter of modernization and I think my point is this: As to whether we are getting enough in modernization to make any appreciable advance in that field in what we might term hardware in the hands of troops. While there is no doubt in my mind that we are able just about to hold the status quo, I am hopeful that we can do better than that as time goes along.

I think that explains it.

Mr. LAIRD. How many more troops could be completely supplied with these modern weapons that you speak of under the terms of your request to the Department of Defense than can presently be provided for under this budget?

Secretary BRUCKER. How many more troops could we have in the Army and be supplied with weapons, you mean?

Mr. LAIRD. No.

My question was: How many more troops could be supplied with fully modernized equipment under the terms of your budget request to the Department of Defense than the amount that was finally approved by the Department of Defense?

Secretary BRUCKER. The figure contrasted with $1.337 billion of new obligational authority for 1961 is $1.651 billion that provides improved modernization capability of that total.

Mr. LAIRD. My question has to do with the strength in troop numbers as far as modernized equipment is concerned.

Secretary BRUCKER. You mean, how many more troops could have modern equipment?

Mr. LAIRD. Modernized equipment under the terms of your budget presentation to the Department of Defense, as compared with the present budget before us?

Secretary BRUCKER. I do not know that I can put it in terms of number of troops because they are disposed in different units and different tactical services and other places.

Mr. LAIRD. Let us put it in terms of rifles then, if you want to take specific examples. I would hope we could get a troop figure that would be easier.

How many more rifles were provided in your budget that you requested of the Secretary of Defense than the amount approved in this budget?

Secretary BRUCKER. I will have to get the figures. I can get this for rifles and other things, if you want it, but as to rifles, there are 120,000 new rifles—M–14's—in this budget, the President's budget that has been submitted. We were requesting 60,000 more rifles in the objectives budget requested.

Mr. LAIRD. The reason I am asking that question is that it is nice to talk about modernization but nobody understands it. Every service comes up here and talks about modernization. We get into discussions of modernizing ships, airplanes, et cetera. In modernizing ships, they talk about putting atomic power on them. Everyone wants something modern and I think you have to get this down to battle groups, divisions, rifles, and things that can be easily understood. I have not heard that kind of a presentation here by the Army.

I wonder if you, General, could tell me how many more battle groups or how many more divisions would be completely modernized out of the request that was made of Defense?

General LEMNITZER. We do not accomplish our modernization that way. We modernize by providing equipment for the high priority divisions of the Army.

For instance, the divisions of our STRAC, our divisions in Europe and in Korea. We would first modernize equipment in those di-

visions rather than taking a single division and modernizing all of its equipment. So I think that, in general, most of the new types of equipment which we would like to get in the hands of the Active Army requires about 7 years to modernize. What we are pressing for——

Mr. LAIRD. How modern is STRAC?

General LEMNITZER. STRAC is quite modern, but there are still many items of newer equipment we would like to get into STRAC—and soon.

Mr. LAIRD. How far along in this program that was laid out to us about 3 or 4 years ago are the STRAC Forces?

General LEMNITZER. In the case of items like HONEST JOHN missiles and that type of equipment, STRAC has them, and has a very limited number of the new rifles.

It does not yet have the newer types of artillery. This is something you cannot accomplish in 1 year for any one unit. It is a progressive business throughout the entire Active Army.

Mr. LAIRD. General Lemnitzer, the Army devotes a respectable amount of money every year to the development and procurement of heavy tanks, armored personnel, carriers, and similar heavy equipment. The committee has been continually reminded by Army witnesses that you are far behind the Russians in the modernization of its equipment and that has been referred to several times in these hearings. On the other hand, the Army has led the fight for the recognition of the limited war threat, and certainly last year General Taylor was very outspoken in this particular area. The Army has tied its demands for more airlift to this particular requirement. The two lines of thought do not seem quite compatible unless we accept the possibility of a limited war with Russia.

Will you explain how the Army requirements for heavy equipment relate to the combat situation anticipated in your planning?

General LEMNITZER. Yes, but I would like to make it very clear that the Army does not regard its role as being restricted to limited war. I consider that the Army's role in general or world war is just as important as it has ever been in the past in the world wars and indeed, as my statement indicates, we see it as being even greater. In the case of limited war, Korea was in every sense a limited war. In it we needed tanks—large numbers of them. We needed heavy artillery and many other types of heavy equipment to combat the North Korean and and Chinese Communist forces. They were equipped with modern types of Russian equipment.

What I am saying is that we need this modernized equipment no matter what kind of forces we are fighting.

Most of our potential enemies are equipped with modern Russian equipment.

FORCES IN EUROPE

Mr. LAIRD. In discussing the type of responsibility the Army has, at the present time we have about five divisions in Europe?

General LEMNITZER. That is right.

Mr. LAIRD. There is apparently a feeling among some observers that this force is too small to survive a war and too large for garrison duty.

General LEMNITZER. I do not think it is either one. Our whole NATO plan provides that these five divisions and supporting forces work with German, British, French, Italian, and other NATO organizations. Altogether, they put together an impressive force. These five divisions are not going to provide a shield by themselves, but this is a collective security arrangement in which our five divisions are our commitment—and an important one—to the NATO organization.

Mr. LAIRD. How many of these troops are combat troops? I refer to the troops in Europe at the present time.

General LEMNITZER. I would say that it is about the percentage I gave yesterday, in the area of 65.8 percent of what we regard as operational forces.

Mr. LAIRD. That figure applies to Europe?

General LEMNITZER. Yes. There might be some minor refinements in the case of Europe. There are different figures in different areas but, across the board, in the Army our total operating forces amount to 65.8 percent of the total strength.

Mr. LAIRD. I heard that figure yesterday but I did not have the understanding it applied to Europe.

General LEMNITZER. It probably would be considerably higher in Europe. I do not have the specific figures for Europe, but I can get that for the record, and will.

(The material referred to follows:)

EUROPEAN COMBAT STRENGTHS

The combat and combat support forces in Europe, excluding military personnel in line of communications, constitute 83 percent of all Army forces in that area.

Mr. LAIRD. In the plans you have, in case anything would happen in Europe, would it be necessary to assign any of your combat troops to the evacuation of our civilians in Europe?

General LEMNITZER. We hope not. It would depend entirely on the circumstances. We would attempt to get our dependents out with a minimum impact on or interference with the combat mission.

It would depend entirely on how the war went. I would say that it is not a factor in the combat effectiveness of our forces in Europe.

CHEMICAL AND BIOLOGICAL WARFARE RESEARCH

Mr. LAIRD. I have received some letters from people back in my home State and I think they have been stimulated by a speech that was made on the floor of the House on January 25, 1960, which had to do with gas and germ warfare. The correspondence which I have received has been critical of me, as a member of the Defense Appropriation Subcommittee, for approving funds in this particular area over the past few years.

I can give you the letters if you would like to have them but I do not think it is necessary to get into the names of the individuals. However, I might add that several of them are letters from clergymen.

I should like a statement on the necessity for the conduct of this sort of a program.

Off the record.

(Discussion off the record.)

(The matter above referred to follows:)

NECESSITY FOR CONDUCT OF RESEARCH IN CHEMICAL AND BIOLOGICAL WARFARE

In the technological race in which we are now engaged with the Communist world, we cannot without risk to the national security and the security of the free world neglect an area such as chemical and biological warfare. To do so we would only invite a potential enemy to attack this Nation with these weapon systems. Conversely, if we are in a position of superiority which can only be acquired through an effective research and development program, then we add to this Nation's posture of strength and these weapon systems become an additional effective deterrent. No matter how strong we may be in other weapon systems, our defense is unbalanced if we are vulnerable to attack from chemical and biological weapons.

Technological advances in the chemical and biological sciences make it imperative that we conduct and maintain an effective research and development program in this area. Chemical and biological agents now in being are 10 to 50 times more potent than those of a few years ago. They can be delivered by means comparable in coverage to other large area weapon system.

The potential of these weapon systems is well known to the Communists and all available information points with certainty to the fact that the Soviets have a stronger capability to wage a chemical and biological attack than the United States and its allies. Further they have a will to wage such an attack and have stated so openly on many occasions. If such an attack were waged, it could have a devastating effect, not only upon our military forces, but our entire civilian population as well, if we are unprepared. The Army's programs in this area are for all practicable purposes the programs of the free world. The Army is responsible for the coordination of all military research and development in chemical and biological warfare for the Army, Navy, Marine Corps, and Air Force. This means that our entire military capability in chemical and biological warfare and defense rests heavily upon the success of the Army's efforts.

In addition, defense of the civilian population depends heavily upon protective measures developed by the Army since these are made available freely to the Office of Civil Defense Mobilization. The Army's programs, therefore, are of crucial importance to our civilian population as well as to our military forces.

INJURY AND FATALITY RECORD—MANHATTAN PROJECT AND ACB RESEARCH

Mr. LAIRD. I would like in the record a comparison of the accidents and loss of life in connection with the development of the atomic bomb and the Manhattan project to show some comparable relationships.

When you pick this one particular area out, as it has been picked out, I think it gives a misleading picture.

General LEMNITZER. Yes, sir.

(The material referred to follows:)

ACCIDENT AND LOSS OF LIFE IN CONNECTION WITH THE DEVELOPMENT OF THE ATOMIC BOMB AND THE MANHATTAN PROJECT

1943–46: Under operational control of the Army: man-hours, 324,381,985; disabling injuries, 2193; and fatalities, 18.

1947–59: Under operational control of AEC: man-hours, 1,729,384,652; disabling injuries, 3,974; and fatalities, 50.

ACCIDENTS AND LOSS OF LIFE IN CONNECTION WITH CHEMICAL AND BIOLOGICAL WARFARE RESEARCH

1950–59: Man-hours, 96,891,821; injurious contacts (minor to serious) 715; including disabling injuries, 55, of which 23 were serious illnesses; and fatalities, 3.

NIKE-HERCULES

Mr. LAIRD. How effective would the NIKE-HERCULES be against aircraft employing a HOUND DOG or air-launched ballistic missile?

General LEMNITZER. The improved NIKE-HERCULES will be very effective against a HOUND DOG-type launched from an aircraft. We have such an improvement program, and it is included in our budget for fiscal year 1961.

Mr. LAIRD. That is programed within the budget before us now?

General LEMNITZER. Within this budget. It is an improved program; and if you are interested in the amounts we can get them.

Mr. LAIRD. No, we can get the amounts later on.

General LEMNITZER. My statement still stands. The NIKE-HERCULES improvement program, financed in this budget, is a very effective weapon against the HOUND DOG-type of missile launched from an aircraft.

RED CHINESE THREAT

Mr. Laird, Mr. Secretary, in your statement you discuss at some length the Red Chinese threat and the mortal danger of the small Far Eastern countries.

You said on pages 3 and 4:

*** * * Massive strength of the ground Army of Red China, if unleashed in overt aggression, would quickly overpower their combined forces without outside assistance * * ***

In this connection, would you please give me some information on this particular question: What is the U.S. Army plan for responding to a massive attack by Red China on the small Far Eastern countries? You raised the question but I did not see any particular plan, or even any suggestion we had a plan, to meet this threat.

Secretary BRUCKER. The reason there is no followup in my statement there is because this is a matter of planning of the Joint Chiefs of Staff for war plans. They have gone over matters of this kind in their war planning and that is a question of what the Joint Chiefs would recommend under those circumstances.

My inference is very strong, that if they overrun—I mean by that, if these countries, let us take Vietnam or even Thailand, if aggression comes, they have sufficient to hold the line for X number of days and the Joint Chiefs of Staff have war plans as to what would happen with respect to moving into or backing up our commitment to those nations there that are members of SEATO, particularly the two that I mentioned——

Mr. FLOOD. If the gentleman would yield?

You do not mean Laos?

Secretary BRUCKER. No, I mean Thailand and also Vietnam. With regard to Laos, that is a separate matter and while we do not have direct obligations there of the same type, the Joint Chiefs of Staff did consider the matter of Laos when it came up and have a plan for that.

General LEMNITZER. I would like to make it clear——

Mr. LAIRD. That was posed in your statement, but I think it was left hanging as I read over the statement.

General LEMNITZER. Such plans are not made by the Department of the Army. As the Secretary pointed out, the general plan for such an operation is prepared by the Joint Chiefs of Staff. The specific plans for such potential operations are prepared by the commander in chief, Pacific, a unified commander, who prepares this type of plan for all areas in his particular area of responsibility. It is not an Army plan. It is a combined-service plan, and one that is prepared under the direction of the unified commander involved.

PLANS FOR FORT HAMILTON, N.Y.

Mr. LAIRD. Mr. Secretary, Fort Hamilton in Brooklyn has been the subject of some controversy in recent years. Currently questions have been raised as to the continued need for this installation and I understand that the Port of New York Authority has agreed to construct new facilities at the port in return for certain land required for the bridge approach. That is, the new Narrows Bridge.

I have here a letter written by a serviceman to his family in which he mentions the relationship of Fort Hamilton to McGuire Air Force Base and I would like to read a few references because this will be the only opportunity I will have to bring this subject up while you are here. I would like to read this into the record and have you comment on a few of the statements raised by this young man:

> * * * Fort Hamilton is actually a duplicate facility. The Army used it at one time to process Army dependents who were going overseas by ship. Now such passengers report directly to their ship on a reservation system and all necessary processing is handled at the port, shipside. As a means for justifying the continuing operation of Fort Hamilton the Army is port-calling air passengers for processing there. Under the single manager program in the Department of Defense this means that they are doing a job which should be performed by MATS at the Air Force aerial port of embarkation at McGuire. Ft. Hamilton has about 50 officers, 400 enlisted men, and 400 civilians. They process about 130 outbound and at most 60 inbound passengers per day (3,600 out, 4,000 or so in per month). At McGuire with 145 people in passenger operations we handled about 18,000 per month, and some months as many as 32,000. Perhaps this illustrates to you the inefficiencies in the program handling Army dependents.
>
> The Army insists that it is necessary to keep Fort Hamilton open because McGuire has only limited transient housing facilities. This fact is true but since the passengers are instructed to report not earlier than 6 hours or less than 2 hours prior to flight departure we eliminate the need for maintaining large military hotels. The second reason the Army gives is that it is necessary to give the dependents a physical examination before moving them overseas. None of the other services require this, and besides, even if they did, it would be best administered before the passenger reaches a port of embarkation.
>
> A short time ago I found out that the new Staten Island Bridge approaches will require right-of-way through parts of Fort Hamilton. Major Swearingen the executive officer at Fort Hamilton spoke of a place for the Army to grant the right-of-way which will cause many of the present facilities to be demolished. In exchange for the right-of-way the New York Transient Authority will rebuild new and better facilities * * *.
>
> The whole function now served by Fort Hamilton could easily be absorbed by McGuire Air Force Base port of embarkation with little or no increase in personnel at the latter station. In terms of our current commercial airlift contract the cost per passenger is the same whether the airline picks them up at McGuire or Idlewild * * *.

This is quite a detailed letter that goes into this whole matter of costs in operating these two particular bases.

What are the plans of the Army for Fort Hamilton?

Secretary BRUCKER. I would like to make just one comment before answering directly with regard to that portion where it speaks about the cost of building. That is not correct. What is happening is that by reason of making an exchange of the place for the abutment of the bridge and taking over that portion of Fort Hamilton where these barracks and places exist, the bridge authority agreed in a formal contract to rebuild the facilities in height rather than in the spread. In that way they will be able to accommodate the people that are necessary there in that personnel center.

Mr. LAIRD. Is it necessary to have the center?

(The information is as follows:)

Fort Hamilton is required as a transfer and returnee-reassignment station which processes military personnel and their dependents traveling to and from oversea destinations. It also provides housing for military personnel of the Armed Forces who are stationed in the New York metropolitan area; supports and maintains an Army Reserve center; and provides a medical processing facility for all military personnel and other authorized personnel en route through the New York Port of Embarkation.

Fort Hamilton is the only installation economically located within the New York area having the capability to perform the mission now being carried on at that station, in that the other active installations either cannot satisfactorily accommodate the present activity or are so located that they could not adequately accomplish the mission.

Secretary BRUCKER. Now we come to that next, but as to the cost of any capital improvement there is no cost to the Army at all. That is simply a relocation in perpendicular as compared to that which was horizontal before. They are rebuilding a portion for us.

Mr. LAIRD. I do not think he makes any statement as to the fact that this is going to cost the Army any military construction money.

Secretary BRUCKER. It is for the operation.

Mr. LAIRD. He is talking about operational costs, and I do not think, in this letter, he contends that there is any cost to the Army as far as the construction is concerned. This is all operational cost.

Secretary BRUCKER. With regard to the annual operational cost, then. I do not know the answer to your question and I would be very glad to take the excerpts from the letter and give a complete answer on the record later.

(The following was submitted later:)

During the calendar year 1959, the U.S. Army Personnel Center at Fort Hamilton processed an average of 12,555 military personnel, 9,212 dependents, and 652 civilian employees and others per month. This workload is identified by category as follows:

	Outbound	Inbound
Military:		
Oversea replacements	587	
Returnees for reassignment		11,030
Transfer processing		938
Dependents	3,149	6,063
Civilian employees and others	473	179

The personnel center includes an oversea replacement station, a returnee reassignment station, and a transfer station. A total of 21 officers, 141 enlisted personnel, and 42 civilians are employed directly in these processing operations. An additional 41 officers, 308 enlisted personnel, and 236 civilians are employed in post operations which contribute only in part to the personnel processing fractions.

The processing accomplished at McGuire Air Force Base involves merely the verification of immunizations and the preparation of passenger manifests. Extensive preliminary processing is done at Fort Dix before individuals are moved to McGuire.

Since Fort Hamilton accomplishes the processing done by both of these stations the workload and manning data for Fort Hamilton and McGuire Air Force Base are not comparable.

Consistent with continuing efforts to increase the efficiency of its operations, the Army has under consideration a program for calling personnel directly to transportation which, if proven to be feasible for extensive application, should ultimately obviate the need for the oversea replacement station operation. However, this will not eliminate the requirement for returnee-reassignment and transfer processing facilities at Fort Hamilton. Accordingly, within the foreseeable future the Army will have a continuing requirement for this facility.

STRUCTURAL DIFFERENCES BETWEEN RUSSIAN AND U.S. DIVISIONS

Mr. LAIRD. In our intelligence briefing in the past few years, one thing always stands out in my mind: the difference between a division strength of a Russian division as far as the number of men is concerned, and a division of the U.S. Army. I still cannot quite understand the difference of almost 3 to 1.

General LEMNITZER. In what? The size of a division?

Mr. LAIRD. Yes.

General LEMNITZER. They are not 3 to 1 in division size. Russian divisions today will range anywhere from 6,000 to 12,000 in strength, depending on the type of the division. Those in East Germany that are highly trained and ready-to-go divisions will be 12,000 to 13,000 in strength which is about the same strength as our pentomic divisions, airborne and infantry.

Mr. LAIRD. I am talking about the total number, including support personnel.

General LEMNITZER. It is pretty difficult to compare them. They are organized somewhat differently. They have a good many units that contribute to the support of their Army, not classified as Army type personnel, and unless you define it clearly and make a comparison, I do not think that the U.S. Army is at a disadvantage in this respect.

There is another aspect of the situation which is very important. Our divisions are deployed long distances from home. For example, in Korea we have two divisions and we have five divisions in Europe. The Soviet divisions on the other hand are very close to home. Accordingly, they do not have the long lines of communication that we do. They are also operating on interior lines of communication which do not extend over large bodies of water, with all the necessary port facilities and lines of communication that we require.

It is very difficult to make a comparison between the two.

CAMP M'COY, WIS.

Mr. LAIRD. Looking back over the last 4 years, Mr. Secretary, do you feel that the Army made a mistake or would you make the same decision now, in regard to the location of ICBM's at Army bases?

Secretary BRUCKER. ICBM's at Army bases?

Mr. LAIRD. Yes.

Secretary BRUCKER. We do not have any of them at Army bases.

Mr. LAIRD. That is correct but the Air Force informs me that the reason they are not there is that they made their first request when they wanted to locate their first ICBM base and the Army would have no part of it.

Secretary BRUCKER. No, I know of no instance where there was any policy or program of that kind instituted or followed by the Army.

Mr. LAIRD. The No. 1 request of the Air Force was to locate a missile base at Camp McCoy, Wis.

Secretary BRUCKER. You mean the one in your State?

Mr. LAIRD. They had planned to go forward and tie them in with some existing Army installations. They are very happy about it, but in looking back over it, I wondered if you thought the Army made a mistake in that particular area. The Air Force always goes back to your original refusal and uses it as an example.

Secretary BRUCKER. I do not, in regard to Camp McCoy, Congressman. The thing was thoroughly staffed by the Army and we presented our position to Secretary Quarles at the time and went all over it, what it would do to the Camp McCoy installation as far as the Army was concerned. We presented it.

The Department of Defense always has the power to overrule any request or suggestion we have and if they saw fit to do it, we would abide by it.

We said that we felt that Camp McCoy was very, very necessary to the National Guard program, the Active Army program and we hoped it would not be spoiled by anything of that kind taking a part of it and dividing it not in two, but part. That was our position about it with respect to the camp and we thought we ought to keep Camp McCoy. That was presented to Secretary Quarles, the Air Force, and to the Secretary of Defense. Our position was never changed or disagreed with or anything at all. The Department of Defense moved away from that completely and that is the last we heard of it.

Mr. LAIRD. Thank you. My time is up.

Mr. MAHON. Mr. Thomson?

Mr. THOMSON. Mr. Chairman, just so the record will be straight and there always seems to be some variance on these things, at the time of the initial selection, Camp McCoy was the No. 1 site under consideration and Warren Air Force Base, which was then an Air Training Command base, was No. 2, and as far as I know, others under consideration were Air Force bases. Now the Air Force tells me that the reason they are selecting these bases around which airfields and strips are located and SAC is operating for missile sites, is because that being the elite force of the Air Force, they have modern troop housing facilities and everything like that and, therefore, they are suitable for use at less cost.

I am inclined to think it has more to do—we will go into this in a minute, later on here, with who is eligible to command the higher echelons.

General Lemnitzer, this is your first occasion to appear before the committee as Army Chief of Staff. By reason of some past experiences, I know a good number of people in the Army, both retired and on active duty, who hold high places, or did hold them, and I would like to say to you that in discussions I have had with some of them

socially, I have not run into a single one who does not approve of your selection and have a high regard for the capacity and leadership you have demonstrated both in and out of combat.

Mr. FLOOD. Do you know where this man was born?

Mr. THOMSON. Probably Pennsylvania.

Mr. FLOOD. That follows Q.E.D.

Mr. THOMSON. Was that on the record?

Mr. FLOOD. You heard what he said. Flood's comment can be on the record.

General LEMNITZER. I appreciate those comments.

INTELLIGENCE ESTIMATES

Mr. THOMSON. General Lemnitzer, we have been hearing a lot here recently about juggling the books on intelligence and accusations that the services are coming up with new gimmicks to get different intelligence figures. With my limited background in the military, I do not think there is anything mystic or classified about the accepted and time-honored procedures for making an intelligence estimate which have proved their worth in and out of combat.

Could you go down the elements in working up an estimate of the situation for me in 1, 2, 3, and 4 order? That is, the elements that go into making up an intelligence estimate of the situation? Would you do that as far as the intelligence paragraph only is concerned?

Mr. FLOOD. What document?

General LEMNITZER. This is our Field Manual 101–5, a staff officers' field manual which presents an outline of the estimate of the situation.

Mr. FLOOD. What year?

General LEMNITZER. 1954, but it is kept up to date.

Mr. THOMSON. I believe, I have the time.

General LEMNITZER. It is the 1954 edition, but with such amendments as have been required, which are a part of it. Every officer in the Army is thoroughly familiar with the format of making an estimate of the situation.

In the first paragraph he writes out in concise and clear terms what his mission is.

In paragraph 2, he discusses the situation and the courses of action which are open to him.

Paragraph 3 is a detailed analysis of the opposing courses of action.

Mr. THOMSON. What goes into that? All I want to know is, What goes into the intelligence estimate?

General LEMNITZER. What goes into the intelligence estimate?

Mr. THOMSON. The process that he goes through. The first thing is the collection of data, is it not?

General LEMNITZER. Yes, sir. He goes through the listing of enemy forces, what the capabilities of those forces are, in his opinion, and he includes this in his analysis.

In paragraph 4, he makes a comparison of his own courses of action.

Mr. THOMSON. Let us just confine ourselves——

General LEMNITZER. I think we ought to mention the last paragraph because it is the most important.

After making these analyses, paragraph 5 is a brief, concise statement of the decision which is decided upon.

Mr. FORD. His decision?

General LEMNITZER. His decision or, in the case of a staff officer, his recommended decision to his commander.

Mr. THOMSON. Under the intelligence estimate itself, he first collects the data and then he evaluates it. Is that not the process he goes through? It is a collection of data and then he evaluates it and then disseminates it. Those are the three things you would do with intelligence?

General LEMNITZER. Yes, sir.

Mr. THOMSON. Collection of data comes from many sources, many reports and rumors, no matter what the credibility you assign to them, and photographs and everything else that can be assimilated on down the line.

General LEMNITZER. Yes.

Mr. THOMSON. The evaluation is where in the conventional sense the intelligence begins, or that is the way I have always looked at it. The other things are mechanical functions of collecting data, and so on.

General LEMNITZER. You sort out those that appear to be the most credible, the sources which are the most valuable and the most likely to be accurate, and things of that kind.

It is a weighing process.

Mr. THOMSON. The second step that he goes through is this: An analysis and discussion of the enemy's capabilities to justify, when possible, the determination or relative probabilities of adoption. Does that sound familiar?

General LEMNITZER. Yes, it does.

Mr. THOMSON. This process that you go through is nothing new is it?

I was in service back in 1941 and that was practically the same wording them, as I remember it.

General LEMNITZER. That is right.

Mr. THOMSON. Probably Clausewitz followed exactly the same procedures, and I am sure, of course, but probably Julius Caesar went through some sort of a similar mental process. This is merely, as a matter of fact, what we came up with as a tried and proven principle of the best guideline for going through this thought process to come up with what the enemy can reasonably be expected to do.

That then goes into the first paragraph of a five paragraph field order, which is the information, first, on the enemy, and then on friendly forces?

General LEMNITZER. That is right.

Mr. THOMSON. The fact that you evaluate the data, etc., to get the probabilities has been a conventional concept of military intelligence down through modern times; is that correct?

General LEMNITZER. That is right.

Mr. THOMSON. I want you to check for me, if you can, something I have been somewhat disturbed about in the little time I have been on this committee. For that matter, not only during that time but throughout the time that I have been in Congress and had access to some information even before coming to Congress about the wide discrepancies from year to year in intelligence estimates or more particularly estimates of Soviet strength.

General LEMNITZER. Are they discrepancies or differences?

Mr. THOMSON. I think they were differences, but here is what seemed to me like what was going on: We would just take the first paragraph of that intelligence estimate and collect some information as best we could and when we got the analysis made, we said that if you took Soviet industrial capacity and Soviet capacity to produce, and their scientific know-how, and so forth, and put it all in bombers, then we would have X number of bombers. That figure would then go into the record and we would turn and say that if they took those same capacities and put them into submarines, we would have X number of submarines.

We then further said if they took their overall capacity and put it into missiles, we would have X number of missiles.

The people who wanted bombers said that we had to have enough bombers to meet this X number of bomber threat, and the people who wanted missiles and the people who wanted submarines said we would have to have at least enough force to meet this fictitious number of missiles, or submarines.

The error of this is as simple as in the case of estimating the yield on a farmers field. We can say with accuracy, "If the farmer puts in wheat, he can grow X bushels of wheat. If he puts in oats, he can grow X bushels of oats. If he puts in barley, he can grow X bushels of barley.

But he cannot grow all the bushels at once.

Actually, that to me tends to explain why we come up with a great big difference of Russian bombers here a year ago, or a couple of years ago and so forth right along, and they do not have them because they decided they were going to build a few missiles and submarines instead of or at least right along with building airplanes.

Is that the problem we have been faced with as far as some of these services trying to lobby for more airplanes, for more submarines, or for more missiles, and so on down the line are concerned?

Am I looking at this problem objectively?

General LEMNITZER. Well, I am not in a position to say that, but what you describe is generally the process which is followed in making an intelligence estimate.

Mr. THOMSON. Now we get down to one more step which is being cranked into the estimate as more reliable information and credible evidence becomes available, that is the factor of probability. We have always recognized that we should do so when we have sufficient evidence to make a reliable report.

We consider the informational data we have collected, even before Mr. Khrushchev spoke out about stopping bomber production and if we take that into consideration and based upon their known production facilities, what they are in fact doing and things like that, come up with what they probably will have, is that not the next conventional step in the intelligence analysis?

General LEMNITZER. That is a step, but I would like to point out that I do not think we should change any of our intelligence estimates merely on what Mr. Khrushchev says.

Mr. THOMSON. I agree with you.

General LEMNITZER. We would have to have that substantiated by intelligence sources.

Mr. THOMSON. I agree with you. In fact, there has been too much done to upgrade the number of bombers they are going to have, and the number of missiles they are going to have, and this and that on what Mr. "K" says. Mr. Khrushchev upgrades and boasts and is a recognized and agreed expert in that field, whereas there seems to be a tendency around here, as expressed by General Twining to downgrade our own. We should be careful that we do not downgrade and invite a miscalculation. The last three wars were a result of miscalculations on how the United States of America would or could react to aggression.

I just wanted to have on the record here that this intelligence process is one that is nothing new or mystic or any new gimmick. It is one we have had for years and has proven its value under all circumstances.

I remember someplace in that field manual it states that this is the same type of thinking that a civilian goes through in making a decision as to whether or not he will go into a certain undertaking. I used that same process as a lawyer, businessman, and so forth, and I found it was in fact a very orderly thinking process all the way through.

General LEMNITZER. That is, in essence, what we feel the outline is. Anyone in arriving at a decision or making an analysis goes through these steps, consciously or subconsciously.

Mr. THOMSON. May I say to you that in my 5 years in the Army I did not waste them because I found out that this process furnished me an orderly basis of analysis for any business undertaking I was thinking about going into. I thought about it and made an estimate of the situation based upon the possible enemy, whether a competitor or what have you. I collected the data and evaluated it and I certainly weighed heavily the capabilities and the probabilities based on the facts. I thought about it and made an analysis of my capabilities and usually that was decided by the banker. Then I decided, made my decision, as to a course of action I was going to follow. I did not issue any order but I put it into execution the same way.

As to the old paragraph 5 on information of the enemy, friendly forces—my wife always disagreed with me because she wanted a fur coat or something which she does not have yet—then you come to your lines of communication and that sort of thing which is a matter of going back and forth with the bankers or political customers through the Post Office.

Anyway, I point out that I have been particularly disturbed about some of the remarks made about cranking new factors in. You crank new factors in when you have better information which permits you to reasonably do it with some degree of credibility.

Would you agree with that?

Perhaps I talked too much, but that is what we go through, is is not?

General LEMNITZER. Yes.

Mr. THOMSON. You will agree?

General LEMNITZER. I agree with the way that you have expressed it.

Mr. THOMSON. Thank you.

ICBM PROGRAM

I have been particularly concerned with the ICBM program. During the recess I devoted a great deal of my time and effort to that, recognizing it is something new that has come into the service with which I had no experience, and recognizing it is a major factor in modern warfare, if not the most major factor.

Throughout these committee hearings last year I heard the expression "Fly the bird." I heard it again through all these briefings. When I got to Convair and we were being briefed there I again heard it. I said to the man briefing me, the deputy manager there and one of the most knowledgeable men in missiles I have ever run across, "Why do you say 'Fly the bird'? Why do you not say 'Shoot it'?"—and that is the only time that I saw him stumped. I told him that I didn't want to embarrass him further; that the Air Force was there. I told him that they had the money and they would buy the missiles that are bought and that he could not fail to lobby for them if he was going to sell his missiles. Then I turned to the Air Materiel Command and the Ballistic Missile Division representatives there and I said, "Out in Wyoming we have a saying that 'If you are going to ride it, get on and ride it.' Is anyone going to fly it?" Of course, the answer was "No."

Now, to me this missile is long-range artillery. When you push the button the round starts on its way. The relatively short distance that you can give it guidance and direction corresponds to the barrel of the artillery piece. At the end of that time it is "on its way," as we used to say, and there is not a darned thing you can do about it except maybe destroyed it for a limited period of time. They could not tell me where that analogy was wrong. Do you know where there is anything wrong with that analogy?

General LEMNITZER. No; I do not.

Mr. THOMSON. Another thing that disturbs me greatly is this proposition: I found as I looked through this missile setup that most of these missiles squadrons were going to be located at places where we have SAC bombers and that the configuration for a wing would be one or more squadrons of bombers and a squadron of missiles. Then I was told we have a concept that "if you cannot fly them you cannot command them; therefore, the wing commander must be a rated officer or a flyer." Commanders of missile wings are the generals. The colonels command the squadrons. Key personnel in the missile program, are the ones who have been to MIT and California Tech et cetera. Many are non-flyers. I talked to some people who have been 12, 15, and 17 years in the service who are the knowlegable missile men with the critical skills and asked what are you going to do about it? Most of them told me that they were going to get in 20 years and get out because they felt they had little if any chance for advancement to general officer. Personnel is our problem. Keeping key personnel is the main problem. From the statements presented here we have seen that in all the services it is the expansive end of it. Those people cannot be replaced at any cost. So naturally it is disturbing to me.

I would like to discuss this with you. During the little time that I spent in the service I was taught that there was a business called

command; MOS 1530, I believe, before the services were separated. I grabbed out a notebook I carried with me 3 years, 2 of them overseas, as an Infantry battalion commander in the Italian theater, and I now refer to it. Even in a battalion combat team there is artillery, engineers, medics, and on down the line. I am no doctor, no engineer, no communications man, and I am not a mechanic when it comes to ordnance. I was expected to know the capabilities of each, though, and command them. The same was true of a company commander and to a lesser extent even a platoon leader. Is there any reason why we cannot go ahead teaching command today so that a man can command without being able to fly, or drive them, or something else? Is there anything that you can think of?

General LEMNITZER. I understand that you are speaking of the command of a missile squadron?

Mr. THOMSON. No.

General LEMNITZER. Of command in general?

Mr. THOMSON. Command in general. I notice in your statement you said that you have these Army schools, 300 or something like that. Do you teach just the command of rifles at Fort Benning? What do you teach down there?

General LEMNITZER. Infantry tactics, techniques, doctrine, planning, all aspects which when all put together mean command.

Mr. THOMSON. How to use all of your various forces?

General LEMNITZER. Yes, but the emphasis at Fort Benning is on the infantry.

Mr. THOMSON. Once you get to Leavenworth the man is taught to command the whole shebang.

General LEMNITZER. That is where all of the combined arms and services are brought together and studied as a whole. At Fort Benning it is related primarily to infantry activities and operations.

Mr. THOMSON. There is then still a separate business, this business called command.

General LEMNITZER. That is true.

Mr. THOMSON. Knowledge of the various weapons and services capabilities, and what you can use them for? You do not have to do it all by yourself. You have subordinate commanders and staff officers to advise you.

General LEMNITZER. The responsibilities of command are very similar across the entire military spectrum of military activities.

Mr. THOMSON. I am glad to hear that in your statement. I hope that we can move in that direction. That is how we can get into a united service. I think that it was a mistake to separate the Army and the Air Force in the first instance. That is why I became disturbed about the concept of it you can't fly them you can't command them. I was even told that people had to go to all of these various schools. If I had gone to an artillery school, an engineering school, an ordnance school, a communications school and so on down the line for 3 months each, I would never have had any time to go overseas and fight. I think that you teach the business of consolidated command without having any such malarkey tossed in to complicate retention of personnel, and so forth.

General LEMNITZER. You are a better commander if you have some knowledge about each one of the fields represented within the area of your responsibility.

Mr. THOMSON. I will agree with you wholly on that. Sure, you have to have a knowledge of the overall use of the weapons and the limitations upon use. I saw a regimental commander order a company of tanks in Italy over a winding road in a defile into suicide. I was tempted to put one right between his eyes but thought better of it. That is an example of misuse of authority and incompetency in command. The commander has to know enough about it to know when to use what and where and how. After all, you have your normal staff officers to advise you on that and also the commanders of the units under the general command, who are specialists in their respective fields. When the artillery came to me they sent an artillery liaison officer who went directly on my staff as an adviser, and if he thought I was going off cockeyed as to the artillery or its best use and employment, it was his duty to tell me about it and then I would make a decision giving proper weight to his advice.

General LEMNITZER. That kind of liaison is absolutely essential.

Mr. THOMSON. How many fliers are there in the Army?

General LEMNITZER. I will supply that information (see p. 529).

DISPOSAL OF SURPLUS PROPERTY

Mr. THOMSON. I would like to know what surplus property the Army has disposed of. I sat in on the 5,000-acre bill in the Interior Committee. I went through Bismarck, N. Dak. last fall and noted they still have Fort Lincoln with just a few people sitting around there. I wonder why it has not been disposed of.

Mr. BRUCKER. We will insert the information in the record.

(The information requested follows:)

Fort Lincoln is the location of the Bismarck Area Command, North and South Dakota Sector, of the XIV U.S. Army Corps (Reserve). It provides administrative, storage, and training facilities for National Guard and U.S. Army Reserve activities. There are 25 sets of family quarters which have been and are currently fully utilized.

Mr. THOMSON. You gave to the Interior Subcommittee when I was a member of it a list of the acreage and the installations you have. I would like to have that list inserted in the record, to show what you have now and what has been disposed of.

(The information requested follows:)

The following tabulation is a June 30, 1959, listing of military real property controlled by the Department of the Army, similar to that shown as of June 30, 1956, at table 2, page 14, House Report No. 215, 85th Congress, on H.R. 5538, a bill to provide for the withdrawals, reservations, or restrictions of more than 5,000 acres of public lands of the United States for certain purposes shall not become effective until approved by act of Congress, and for other purposes.

Military real property controlled at installations, by States, Department of the Army, as of 30 June 1959

State	Cost to U.S. Government [1] (Thousands of dollars)	Land area (acres) controlled					
		Total	Owned	Public domain	License or permit	Easements	Leased [2]
Total	$8,096,018	8,714,253	3,972,935	3,927,961	359,583	33,058	420,716
1. Alabama	360,996	188,123	140,979	33,411	7,065	269	6,399
2. Arizona	98,252	1,011,059	61,083	942,706	4,079	1	3,190
3. Arkansas	175,409	95,978	94,307	16	605	158	892
4. California	519,997	1,066,924	346,648	663,013	6,772	2,955	47,536
5. Colorado	173,113	185,880	78,622	1,761	74,827	39	30,631
6. Connecticut	3,932	1,134	427		0	507	200
7. Delaware	16,393	1,876	1,648		155	19	54
8. District of Columbia	27,130	325	317		8	0	0
9. Florida	4,004	4,453	82	14	0	0	4,357
10. Georgia	263,842	526,861	519,486		880	6,440	55
11. Idaho	417	12,344	10	3,166	9,024	0	144
12. Illinois	265,290	56,094	54,868	0	360	318	548
13. Indiana	322,713	133,310	132,857	0	0	259	194
14. Iowa	77,581	20,238	20,010	0	0	0	228
15. Kansas	267,246	80,976	55,767	24,965	0	228	16
16. Kentucky	319,553	198,933	197,898		154	811	70
17. Louisiana	154,256	168,378	118,351	0	46,838	430	2,759
18. Maine	7,243	597	400		3	184	10
19. Maryland	394,137	99,767	95,801		158	1,339	2,469
20. Massachusetts	137,640	34,722	14,448		17,868	427	1,979
21. Michigan	133,539	20,224	16,828	2,348	325	157	566
22. Minnesota	59,068	3,313	2,955	0	69	249	40
23. Mississippi	18,670	21,107	7,497	0	1,963	7	11,640
24. Missouri	261,442	126,315	74,841	0	51,354	75	45
25. Montana	2,396	8,433	6,521	1,548	0	0	364
26. Nebraska	77,796	51,489	50,447	20	0	0	1,022
27. Nevada	17,582	31,102	208	6,838	24,056	0	0
28. New Hampshire	3,637	268	242		26	0	0
29. New Jersey	366,386	51,115	49,268		180	1,056	611
30. New Mexico	193,523	2,025,893	174,566	1,716,008	140	37	135,142
31. New York	368,226	142,169	138,299		80	2,764	1,026
32. North Carolina	203,399	153,862	142,970		5,620	4,994	278
33. North Dakota	999	181	170	0	0	1	10
34. Ohio	226,451	34,803	34,151	0	0	196	456
35. Oklahoma	102,075	173,756	88,917	53,845	30,544	12	438
36. Oregon	42,400	22,627	11,187	8,440	1	2,649	350
37. Pennsylvania	351,525	54,024	38,057		13	937	15,017
38. Rhode Island	2,672	712	375		40	282	15
39. South Carolina	56,724	56,888	53,670		319	9	2,890
40. South Dakota	35,846	21,919	12,979	1,201	7,630	109	0
41. Tennessee	251,712	109,854	109,031		653	153	17
42. Texas	553,134	555,104	415,728		9,266	989	129,121
43. Utah	145,453	548,523	48,452	435,818	55,680	5	8,568
44. Vermont	457	47	12		0	0	35
45. Virginia	565,509	165,599	161,124		1,513	1,828	1,134
46. Washington	247,120	362,593	325,982	27,617	1,314	1,879	5,801
47. West Virginia	70,278	1,950	1,621		0	0	329
48. Wisconsin	148,914	72,666	68,307	2	1	286	4,070
49. Wyoming	11	9,745	4,521	5,224	0	0	0

[1] Data represent the cost of land and improvements.
[2] Excludes acreage leased outside of military installations.

During fiscal years 1957, 1958, and 1959 the Army disposed of the following real property:

State and fiscal year	Acres			Cost to Government (land and improvement)	Lands transferred within DOD	
	Fee and land improvement	Public lands	Leased		Acres	Cost to Government (land and improvement)
Alabama:						
1957			146	$1,194,724		
1958	1			1,193,494		
1959	57			2,867,670		
Arizona:						
1957	1		39	357,481		
1958		10				
1959				300,632		
Arkansas:						
1957	9			529,611		
1958	8			459,073		
1959		60		588,387		
California:						
1957	379		20	1,738,374	64,050	$50,864,099
1958	10		69	1,743,165	1,457	11,993,879
1959	749	15	99	10,256,669	4	437,796
Colorado:						
1957	139		328	892,312		
1958	326			39,779		
1959	132			3,000		
Connecticut:						
1957			11			
1958			57	150,634		
1959						
Delaware:						
1957						
1958						
1959						
District of Columbia:						
1957						
1958						
1959						
Florida:						
1957						
1958				9,250		
1959						
Georgia:						
1957				309,016	1	20,180
1958				259,660		
1959	15			4,654,019		
Idaho:						
1957						
1958						
1959		122,951				
Illinois:						
1957	312			593,360		
1958	117			552,325		
1959	225			769,855		
Indiana:						
1957	19	50	8	25,503		
1958	68			13,600		
1959	985			10,940,040	16	
Iowa:						
1957				61,898		
1958				5,500		
1959				16,500		
Kansas:						
1957				361,512		
1958		9		310,661		
1959			621	412,232		
Kentucky:						
1957	13			4,141,376		
1958	258			2,879,332		
1959	2,172			942,233		
Louisiana:						
1957				110,484		
1958	15,341			3,207,192		
1959		46				

State and fiscal year	Acres			Cost to Government (land and improvement)	Lands transferred within DOD	
	Fee and land improvement	Public lands	Leased		Acres	Cost to Government (land and improvement)
Maine:						
1957						
1958				$200		
1959				6,100		$56,157
Maryland:						
1957	3		53	603,104	7	1,150
1958	12			433,651		
1959				237,570		
Massachusetts:						
1957	1			26,618		
1958	183		14	4,110,038		
1959	23	4	43	436,330	1	9,027
Michigan:						
1957			17			
1958			54	784,714		
1959		5	151	183,047		
Minnesota:						
1957				4,614		
1958						
1959						
Mississippi:						
1957			1,367			
1958						
1959			18	15,250		
Missouri:						
1957		205	70	226,946	1,958	
1958				7,855		
1959				1,170,308		
Montana:						
1957				3,900		
1958						
1959						
Nebraska:						
1957	40			3,180		
1958				9,914		
1959	4			190,088		
Nevada:						
1957						
1958						
1959						
New Hampshire:						
1957						
1958				420		
1959						
New Jersey:						
1957		151	1,015	230,220	24	1,402
1958	20		33	931,100		904
1959				8,439		
New Mexico:						
1957	5			1,275,943		
1958		2		532,352		
1959	33		2,376	86,778		
New York:						
1957	30		12	1,946,418		
1958	49		59	316,603	16	12,441
1959	243	10		3,141,294		
North Carolina:						
1957			303	62,105		
1958				1,605,364		
1959	18			1,303,664	5	3,700
North Dakota:						
1957	144			1,000		
1958						
1959						
Ohio:						
1957	672		176	133,508		
1958	9			46,972		
1959	41			33,937		
Oklahoma:						
1957				5,230		
1958						
1959				849,337		
Oregon:						
1957	234			442,851	2	12,282
1958				574,095		
1959				1,678,060		

State and fiscal year	Acres			Cost to Government (land and improvement)	Lands transferred within DOD	
	Fee and land improvement	Public lands	Leased		Acres	Cost to Government (land and improvement)
Pennsylvania:						
1957	1		1	$5,850,346		
1958	786		80	714,064		
1959	2		4	680,345		
Rhode Island:						
1957	35			400,757		
1958				6,595		
1959	37			402,289		
South Carolina:						
1957			4	1,240		
1958				45,164		
1959						
South Dakota:						
1957						
1958						
1959						
Tennessee:						
1957				20,175		
1958				227,275		
1959	61			122,451		
Texas:						
1957			1,079	2,547,444	2	$11,716
1958	238	5		3,794,944	1	37,967
1959	1,191		374	3,959,490	522	720
Utah:						
1957				38,205		
1958				1,029,802		
1959				467,645		
Vermont:						
1957						
1958						
1959						
Virginia:						
1957	25		2	1,379,398	28	87,381
1958	19	29	29	758,592	17	288,427
1959	881	15		793,504	11	3,911
Washington:						
1957	289	569	211	7,407,092		
1958	40	272	48	874,507	121	
1959	48	50	2,136	3,993,475	117	4,056,401
West Virginia:						
1957			1			
1958				54,560		
1959						
Wisconsin:						
1957	446			326,865		
1958	5			30,935		
1959	256	585		41,437		
Wyoming:						
1957						
1958						
1959						

General LEMNITZER. In the Army on December 31, 1959, 6,209 aviators are on flying status. Of these 5,024 are commissioned officers and 1,185 warrant officers.

Mr. THOMSON. What does the charge in an atomic warhead look like? Does it look like powder, or what are the characteristics of it?

General LEMNITZER. Off the record.

(Discussion off the record.)

Mr. THOMSON. I would like to have you put in the record as much as you can of the destructive capability of an ICBM.

General LEMNITZER. Off the record.

(Discussion off the record.)

SINGLE MILITARY SERVICE

Mr. THOMSON. I am concerned about the rivalry of the services. I have been looking forward to the day when I think we can get greater results from our defense dollar through a single service, or at least get the Air Force and the Army pulled back together.

Now, I would like to have your comment on this record. It seems to me that when you now have separate promotion lists, and so forth, every one tries to do the same thing. In some respects that is good. Had it not been so we would not have had a JUPITER to put up EXPLORER I and we would not have a POLARIS with a solid propellant capability. I can see no real possibility of getting rid of the waste and duplication though until we get a single promotion list back again, and I would like to have your comment on the desirability of that for the record, and the limitations on it. I mean by that, stopping such things as a man walking into the proposition that he cannot go above a colonel unless he belongs to the fraternity.

General LEMNITZER. Yes.

(The requested information follows:)

MERGER OF AIR FORCE AND ARMY

The Army has considered possible Army-Air Force merger from all aspects, including that of the missile effort, and has concluded that such merger is undesirable. First, the full effects of the DOD Reorganization Act are not yet known, and the present structure appears to deserve further evaluation. Second, Army and Air Force missions are now widely divergent and are becoming increasingly so with the passage of time. The Army does not believe that merger of the two departments into a single department with such diverse missions would promote efficiency or military effectiveness. In fact, in the current situation it seems premature to initiate a formal study of the desirability of such a merger.

RESERVE COMPONENTS

Mr. THOMSON. I would like to have you comment upon the revision of the roles and missions of the Reserve Forces and the National Guard.

General LEMNITZER. The presently assigned roles and missions of the Army National Guard and the Army Reserve are as follows:

First, the Army National Guard U.S. Air Defense Missile units are now discharging a portion of the Army's mission for the air defense of the United States. These units will continue to perform this mission during conditions of cold, limited, or general war.

Second, trained individual reinforcements from the Army Reserve would be utilized under conditions of either limited or general war to bring Active Army units quickly up to wartime strength, to bring Reserve component units up to full strength as they are mobilized, and to create new units as they are required.

Third, because the Active Army is not a completely balanced force, a number of Reserve component units have been designated to provide such balance; for example, combat support and service support units. These units we call "units to round out the Active Army." They would be utilized under conditions of either limited or general war.

Fourth, the Active Army during peacetime does not maintain a mobilization base adequate to support wartime mobilization. The term "mobilization base" is used to describe the reception stations,

training centers, garrison detachments, etc., which combine efforts to receive, train, and deploy men and units during mobilization. The Reserve components provide these necessary mobilization base units, quickly available to expand the mobilization base of the Active Army as might be required under conditions of either limited or general war.

Fifth, in addition to the forces mentioned previously the Reserve components contain a large number of units which are available for a phased expansion of the combat forces of the Army. Under conditions of limited war it is probable that the Ready Reserve STRAF or some portion thereof, would be mobilized to recreate a strategic reserve in the United States. Under conditions of general war the entire Reserve components are, of course, available for a phased expansion of the Army.

Sixth, being prepared to assist civil authorities in case of a natural disaster or as a result of attack upon the continental United States is an emergency task within the mission of all Army units, both Active and Reserve. Because of their wide geographical distribution; their possession at all times of arms and equipment; and because their trained manpower is militarily organized; the Reserve components have a very real and ready capability to respond to an emergency. The capability is available today, and would be available during conditions of both limited and general war, consistent with the requirements of their primary military mission.

Finally, by their very existence as a large force of trained individuals and units, the Reserve components enhance the overall effectiveness of our Army and by so doing, increase to a marked degree its deterrent value during periods of cold war.

At the direction of the Secretary of Defense, the Joint Chiefs of Staff are currently reviewing the roles and missions of the Reserve Forces of all services. That review is not yet complete.

With reference to the Army, I would like to emphasize that the missions of the Army National Guard and the Army Reserve are a part of the overall missions of the Army itself. Within the One Army concept they contribute to the overall job to be done in accordance with their resources and capabilities, thus ensuring the most economical utilization of the total resources available to the Army.

Mr. THOMSON. I sincerely hope that some thought will be given to doing what is best for the country rather than the individual in considering change of Reserve policy. The law now in effect was designed to take care of the man who has already outlived his usefulness as I see it. I would like to have you tell me why we do not look at it this way: A man stays in Active Reserve as long as there is a slot for him where he can make a real contribution, and by selection boards you keep weeding them out. To me the philosophy behind the Reserve Act of 1944 was a darned good job of lobbying by the older Reserve officers, but there was very little thought given toward continuing our Reserve posture at a high level in this country. I would like to have your analysis.

General LEMNITZER. The Army has taken stringent measures to insure that members of the Ready Reserve are fully qualified to perform their assigned duties in the event of a national emergency or mobilization. Basic guidance to the field in this area is contained in Hq, CONARC Memorandum No. 20, dated April 15, 1958, which

provides that officers will be held to high standards of professional and physical attainments and will perform their duties and exercise the necessary leadership commensurate with their grade and assignment. Officers who do not measure up to the required standards will be relieved of unit assignment. The professional qualifications which must be met include the following:

(1) As a general rule, officers in troop units are required to be branch and MOS qualified. Deviations from this is restricted to the extent necessary to secure appropriate assignment for highly qualified individuals and for Army aviators. In those instances where individuals are assigned to a unit which is inconsistent with his branch, he is required to become branch and MOS qualified within 3 years from date of assignment. If, at any time during the 3-year period it appears that the officer is not making sufficient progress toward or fails to meet branch and MOS qualification, he will be removed from unit assignment.

(2) Officers are required to demonstrate continued professional advancement. To insure adherence to this requirement officers records are reviewed annually to determine if they have completed or have constructive credit for service schools commensurate with their grade. Those not qualified are released from unit assignment.

(3) Officers must also show continued professional advancement by qualifying themselves for the next higher grade. Enrollment in appropriate level extension courses, attendance at USAR schools is considered evidence of efforts to improve professional status.

(4) Selection of officers for unit vacancies is generally predicated on officer efforts to advance his professional standing.

(5) Officers are required to meet prescribed physical standards for retention in Reserve status. In addition, unit officers are expected to be physically fit for immediate order to active duty. Those officers whose physical condition does not meet these standards are removed from unit assignment.

(6) Officers in TOE units are expected to be of suitable age for their positions on mobilization. In this respect, general guidance is given which insures that officers whose ages exceed prescribed levels by grade will not be assigned to TOE units. Because of the types of units and nature of duties therein, some leeway is permitted in TD units, maneuver area commands, or divisions with replacement training missions.

In addition to the policies stated, the Army has implemented the provisions of the Reserve Officer Personnel Act of 1954, which governs the promotion, retention, and elimination of unit and nonunit officers.

As a further effort to insure the mobilization readiness of the Ready Reserve, the Army has prescribed a screening program (AR 135–133), designed to remove from a Ready Reserve status, those individuals whose availability to the military in a national emergency is questionable. Included in this category are the following:

(1) Those who have no service obligation remaining or have fulfilled their Ready Reserve obligation.

(2) World War II or Korean war veterans.

(3) Those who are engaged in a critical civilian occupation.

(4) Those who are preparing for the ministry or who belong to a religious faith which requires the individual to do missionary work.

(5) Those who qualify for transfer or discharge under reasons of extreme personal or community hardship.

(6) Those who are elected or appointed officials of a State or the Federal Government.

Comparable standards are applicable to enlisted personnel commensurate with the Ready Reserve obligation established by law. Those individuals who enlist in the Reserve under any provision of law except under section 261, Armed Forces Reserve Act, 1952, as amended, are required to enter upon 6-month active duty for training within 120 days of enlistment. In order to enlist, he must meet certain prescribed mental standards to insure his capability to utilize the training he will receive.

The 6-month training provides not only the basic fundamentals of soldiering, but also furnishes training in a military specialty for which a requirement exists in the unit in which the individual enlsted and for which he has the aptitude. Upon completion of this training he returns to the unit and serves in the capacity for which trained. Subsequent advancement and service is dependent upon the individual's military improvement through schooling, training, or both.

Individuals enlisting under section 261, AFRA, 1952, as amended, or those entering the military service through induction serve 2 years on active duty. The military specialty for which they are trained is based upon the needs of the Active Army and the aptitude of the individual. Upon completion of the 2 years when, by law, the individual reverts to the Ready Reserve, every possible effort is made to place him in a unit where his military skill and training can be utilized. Where this is not possible, he is retained in a nonunit status for the duration of his obligated service to be used as a filler or replacement in a national emergency or mobilization. He is required to undergo sufficient active duty for training to maintain his proficiency during this time.

In each instance for officers and enlisted men in the Ready Reserve, there is a definite role and assignment which makes a valuable contribution to the military posture of the Army. To uphold this posture to the highest possible degree, the Army is taking all possible steps to ascertain that those who, for whatever reason, cannot contribute to an acceptable degree are removed from the Ready Reserve.

Mr. THOMSON. We are always disturbed, I am sure, about a force that is adequate. I realize that you have to have strength, weapons, equipment, supplies, and you have to have mobility, firepower, and training to put together a force. I would like to know for the record how much was spent on JUPITER and how much has been appropriated for the modernization of the Army and for research and development on infantry weapons, and how much is actually being spent to get them down to the division level.

General LEMNITZER. Any particular period?

Mr. THOMSON. From 1950 forward.

General LEMNITZER. Yes.

(The information is classified and will be furnished the committee separately.)

RATIO OF SUPPORT TO COMBAT TROOPS

Mr. THOMSON. On the personnel program and the ratio of support to combat, I notice in the record percentage figures are stated combat approximately 66 percent, support 5 percent, and the remaining training. The figure that I would like to have is the figure that will be comparable to what we heard during World War II, that it took nine men behind the line to keep one man in the line.

I would like to have in the record a comparable figure to that.

General LEMNITZER. You are referring to what was then called the division slice.

(The information requested follows:)

Subject: Ratio of combat forces to all other military personnel (U.S. Army)

Fiscal year	Total Army strength	Combat forces	All others	Ratio of combat forces to all others
1957	997,994	430,784	567,210	1:1.32
1958	898,925	350,872	548,053	1:1.56
1959	861,964	353,185	508,779	1:1.44
1960	870,000	356,800	513,200	1:1.44
1961	870,000	363,000	507,000	1:1.40

NOTE.—1957 through 1959 based on actual strengths and include reimbursables. 1960–61 based on programed strengths and do not include reimbursables.

NUCLEAR WAR

Mr. THOMSON. Tell us how you would envision the nuclear war situation developing and what you think the effect of devastation on this country would be. I am thinking in terms of something that will knock everything out and kill off everyone in the country attacked. I do not conceive of things that way. I think that if I can get back to my little shack in Wyoming I could live through it. If we were to have an allout general war I would like to know what we, in Army opinion, would have left to start with. Just summarize.

General LEMNITZER. We have discussed that. That was discussed off the record.

NIKE-HERCULES CAPABILITY

Mr. MAHON. I believe you said in testimony earlier this afternoon that the improved NIKE-HERCULES would be an effective weapon against the HOUND DOG type missiles?

General LEMNITZER. Yes. NIKE-HERCULES is effective against airborne launched missiles coming into a ground target.

Mr. MAHON. I had the impression this was not necessarily valid.

General LEMNITZER. We think that it is, because we have had tests at White Sands which demonstrate conclusively that the NIKE-HERCULES has a demonstrated capability to engage successfully small supersonic targets. At White Sands, the NIKE-HERCULES has successfully intercepted such a target missile three times out of three attempts. The highest intercept was at an altitude of 14 miles. It has destroyed at that altitude traveling at many times the speed of sound. Insofar as is known, those are the highest and fastest live targets ever successfully engaged by a surface-to-air missile.

Mr. MAHON. And that information is available to the Air Force?

General LEMNITZER. It is.

Mr. MAHON. Mr. Weaver, a member of this committee, has been ill for the past few days. He has had prepared a statement and questions for you, Mr. Secretary, and you, General Lemnitzer. Those questions will be submitted for the record.

(The questions referred to follow:)

QUESTIONS BY HON. PHIL WEAVER TO SECRETARY BRUCKER AND GENERAL LEMNITZER

1. Mr. Secretary, I note on page 7 of your statement that you say that backing up STRAF you need the immediate availability of National Guard forces in the event of emergency. Now, sir, is this consistent with your budget recommendations cutting back National Guard forces?

(The information is as follows:)

Secretary BRUCKER. As I have stated many times in this testimony, it was not my recommendation that National Guard forces be reduced in fiscal year 1961. I have consistently maintained that the strength of the National Guard should not be less than 400,000.

2. Mr. Secretary, from looking at the figures presented to this committee I get the feeling that there is too much of a Buck Rogers attitude toward modern war. Do you think that your National Guard strength requests are adequate to meet a series of brush fire wars? How about if there are two emergencies at once in different parts of the world?

(The information is as follows:)

Secretary BRUCKER. Of course the adequacy of forces can only be determined when the actions facing these forces are clearly defined. However, as a general answer to your question, I would say that the present strength of the active Army and Reserve forces is adequate to cope with two emergencies in different parts of the world, provided that mobilization is authorized in time to permit reconstitution of the deployed forces.

3. I have heard the concept mentioned—and I personally violently disagree with this thought—that the National Guard should become a sort of internal police force, to meet flood emergencies and perhaps to patrol our cities in case of a nuclear disaster. Any comment on this?

(The information is as follows:)

Secretary BRUCKER. The Army National Guard is considered an integral part of the combat potential of the Army, to be called or ordered into active Federal service as required for the accomplishment of assigned Army missions. The Army does not favor the creation of a separate military force for the performance of support tasks during domestic emergencies, including the type which may be caused by a nuclear attack upon the United States. Accordingly, I am opposed to any concept which proposes that the Army National Guard be turned into a special type of force for the sole purpose of performing noncombat type missions in natural or enemy caused disasters.

4. How about you, General, would you care to comment on this?

(The information is as follows:)

General LEMNITZER. I wholeheartedly agree with the Secretary and desire to add that in view of the Army's overriding combat mission, it is not feasible or necessary to precommit or attempt to set aside certain active or reserve component forces solely for possible domestic emergency support tasks. Rather, Army preparedness (active and reserve components) to support civil authorities in natural or enemy caused disasters can be accomplished by thorough planning which takes full advantage of the organization, equipment, disposition, and command structure of the combatant Army. This is what we are doing today.

5. Mr. Secretary, when I toured the Pacific last fall I was surprised to find no antiaircraft facilities—NIKE—in Hawaii. Why this oversight?

(The information is as follows:)

Secretary BRUCKER. Mr. Weaver, the air defense of Hawaii was programed in accordance with the worldwide air defense priorities established by the unified commanders and approved by the Joint Chiefs of Staff. These priorities were in consonance with the funds available to accomplish the assigned military tasks.

Hawaii is scheduled to receive U.S. Army NIKE-HERCULES air defense equipment this year.

6. General, what has been done to correct this?

(The information is as follows:)

General LEMNITZER. Air defense units, armed with the U.S. Army's finest operational surface-to-air guided missile—the NIKE-HERCULES—are to become operational in Hawaii this year. These units are to be manned by personnel of the Hawaii National Guard, who have recently completed their technical and operator training at the Air Defense School, Fort Bliss, Tex. When operational on sites, the firing units will function on a full-time (24 hour) basis to provide air defense for the vital installations located in Hawaii. Authorization has been given to construct four NIKE-HERCULES sites on the island of Oahu. Additional sites will be selected in the near future, so as to provide an effective, balanced surface-to-air missile defense of the island.

7. Mr. Secretary, are we implementing rapidly enough our Army air defense units (NIKE) in areas overseas which are critically important to our personnel or bases?

(The information is as follows:)

Secretary BRUCKER. Mr. Weaver, our U.S. NIKE-HERCULES units are operational in Alaska and overseas in Europe, Greenland, and Okinawa. The only NIKE-AJAX units now operational overseas are in Europe, and these are being converted to NIKE-HERCULES in the near future. Other deployments, such as that to Hawaii, (question 5, preceding) will continue to improve the air defense posture overseas. In addition to those units of the U.S. forces overseas, NIKE-HERCULES is also manned and operated in units of our oversea allies. On Taiwan, for example, one battalion, manned and operated by the Chinese Nationalists, is operational. In Europe a number of NIKE-HERCULES battalions, manned and operated by personnel of NATO countries under the military assistance program, are operational in area air defense. While not U.S. units as such, these battalions do provide additional air defense for U.S. personnel and bases. Countries which are participating in this program are Norway, Denmark, Netherlands, Belgium, France, Germany, Italy, Greece, and Turkey. The rate at which both U.S. and allied air defense can be provided in the areas to which you referred depends on the availability of sufficient numbers of trained personnel and of equipment for deployment with the units. The program is being implemented in accordance with current schedules, and at a rate consistent with other defense programs and force ceilings.

8. General, do you feel that at the present time we have adequate ground forces in Hawaii?

(The information is as follows:)

General LEMNITZER. In view of the threat to Hawaii wherein we visualize only small-scale raid-type operations in future wars, I'd say our forces there are adequate. If on the other hand you are asking about the adequacy of our forces on Hawaii to reinforce our garrisons elsewhere in the Pacific or implement contingency plans, I would say they are adequate although I would like to see them brought up to full strength. Of course their adequacy to meet emergencies is dependent upon necessary airlift and sealift being readily available.

9. Mr. Secretary, could you tell me for the record how far this one division (minus) which we have in Hawaii is from full strength. What are the plans, if any, to bring it up to strength?

(The information is as follows:)

Secretary BRUCKER. The 25th Infantry Division in Hawaii is presently authorized a strength of 10,529. This is compared with a full division strength of 13,746. The division is minus one reinforced battle group. With respect to the second part of your question, we have a plan, now under consideration by the Joint Chiefs of Staff, which would provide the missing battle group for the 25th Division. This plan provides for stationing that battle group on Okinawa.

10. Concerning BOMARC, I would like the Army's comments on this missile with particular reference to its reload time as compared with NIKE–HERCULES.

(The information is classified and will be furnished the committee.)

11. Mr. Secretary, what is your estimate of the effectiveness with which our military assistance dollars are used on a comparative basis in Korea, Taiwan, and the Philippines?

(The information is classified and will be furnished the committee.)

12. General, what is your considered estimate along these lines?

(The information is classified and will be furnished the committee.)

13. Mr. Secretary, how have the relations between our military assistance group people been with the Philippine Government?

(The information is as follows:)

Secretary BRUCKER. While opinions may differ on occasion, as they will among any groups working closely together, the Army is not aware of any adverse relations between the Joint U.S. Military Advisory Group and the Republic of the Philippines.

14. General, do you think the funds being spent in the Philippines are developing an effective fighting force capable of taking its place on a coequal basis with the forces of Nationalist China or the ROK's in the event of an emergency?

(The information is as follows:)

General LEMNITZER. As Secretary Brucker just stated, there should be no doubt we are realizing a full return for the funds being spent in the Philippines for military assistance. In addition, I would like to point out that the Philippines have met the military demands of various Asian crises in the past, whether national or international. Thus, I firmly believe we can continue to count on them to stand with their friends and allies in the event of an emergency.

15. When I was in Korea I was told by some Army people there was a serious lack of some small supplies such as sparkplugs. Has anything been done to correct this situation as it applies to sparkplugs and other small items in the inventory?

(The information is as follows:)

General LEMNITZER. The 8th U.S. Army has not been able to requisition sufficient items which are purchased from the stock fund to keep their authorized depot levels full due to O. & M. A. fund limitations. However, there have been sufficient stocks close by to fill combat and support unit requisitions.

Isolated instances of shortages of a local nature have occurred but were corrected quickly. The 8th U.S. Army shortage of O. & M. A. (consumer) funds needed to procure stock funded items, such as you mentioned, was reviewed by a joint DOD–DA team who visited Korea in November 1959. Subsequent to this visit DOD authorized release of additional O. & M. A. funds to USARPAC. In January 1960, $8.5 million were provided USARPAC for the purpose of satisfying 8th U.S. Army peacetime operating stock shortages for the balance of fiscal year 1960.

Mr. Secretary on page 19 of your statement you say that you are not advocating that the United States attempt to match Soviet production, gun for gun and tank for tank, but that the free world modernization and production programs must be kept in a proper relationship to those of the Communist world to avoid many other consequences over and above the relative obsolescence of the equipment in the hands of our own Active Forces—serious as that may be. Now, Mr. Secretary, my question is this: Is the United States and its allies keeping its modernization and production programs in a proper relationship to those of the Communist world?

(The information is as follows:)

Secretary BRUCKER. Of course, the total military posture of the Free World, and of the United States in particular, as the senior partner in the community of free nations, depends upon a great many factors other than those within the responsibilities of the Army. The Secretary of Defense and other officials have testified before Senate committees, and in public statements, that the overall military strength of the United States vis-a-vis Soviet Russia is such that we can deter any attack. This, we must realize, takes into consideration the complete asset and production positions of all the military services as well as those industrial facilities which back them up. For the Army's part, you may rest assured that we are buying, and gearing our production programs toward those items of the most modern types which will provide the greatest percentage increase in total combat effectiveness, and thus assist in offsetting the numerical disparity we currently have in relation to the Soviets. We are maintaining the training of the troops who will use those weapons at the peak of efficiency and are maintaining a sound production base program to insure that we can step up the availability of any critical item should a national emergency arise. I feel that within this combination of factors the Army is doing its full part in establishing and preserving the deterrent capability of the free world within fund resources available to us.

UNIFIED COMMANDS

Mr. THOMSON. Will you comment for the record on unified command—how it is working out and where is the lowest level that you use combined airpower and ground forces under a unified command, and, also, in your consideration of the revised roles or missions for the Reserve Forces, is any consideration being given to a civil defense mission?

The Independent Offices Subcommittee has had a major problem in proposals for civil defense spending and the extreme high cost of it. To me it seems when you have a limited war you do not need to mobilize all your Reserve Forces. Korea proved that to be true. When you have a general all-out war you would have warning both militarily and politically and would be able to build up. In the meantime the Reserve Forces could play a very important part in the training, and so forth, of the people for civil defense. I would appreciate your comment on that for the record.

(The requested information follows:)

The successful prosecution of limited war may well require the mobilization and employment of Reserve component forces in this type of conflict. Active Army Forces would be employed first, with additional Reserve component forces utilized as necessary to meet the combat requirements in the area of operations, and to adequately reconstitute the strategic Army Forces in the United States. The extent of Reserve component mobilization will be dictated by the demands for Army Forces as occasioned by the magnitude and duration of the limited war. Such a conflict may well be of such proportion as to constitute a prelude to general war, and find Army Forces, including Reserve components, engaged on a maximum capability basis. Accordingly, in the interest of a strong military and an equally strong civil defense posture, the Army's Reserve component forces should not have a civil defense role which is different from that of the Active Army, since the requirement to fulfill the combatant role may preclude their availability for the performance of important nonmilitary defense tasks.

LACROSSE MISSILE

Mr. MAHON. Some discussion has arisen among members of the subcommittee, including Mr. Flood, Mr. Ford and myself, involving the LACROSSE and the problem of the LACROSSE between the Army and the Marines. We have had a conference here off the record in regard to these problems.

Could you put something on the record at this point with respect to the cancellation of orders by the Marines for the LACROSSE and LITTLE JOHN and what the implications of the whole thing may be?

General LEMNITZER. Yes. I think that it might be helpful for you to comprehend it if I gave a general dscussion now.

As is the case with most missiles, we have the first generation LACROSSE missile. When we get the experience and opportunity to improve it we will go on to the second generation. We have such a plan for the LACROSSE. In working out this 1961 budget we found that we could not afford the cost of our improvement program for LACROSSE. We had certain important features in that improved program that the Marines wanted. We wanted them too, but we just did not have the money to get them, so we canceled our improvement program for the time being and we are going to equip our units with our first generation of LACROSSE.

The Marines, for various reasons in connection with their type of operations and missions, did not want it. They needed their money for things they thought were more important than this, so they dropped it. That is the basis for their cancellation of the LACROSSE missile.

Mr. MAHON. How serious is it that you are canceling out this second generation of LACROSSE?

General LEMNITZER. We hope it will not always remain canceled out. We are looking for an improvement program in the future.

Mr. MAHON. Is this costing the taxpayers any money, the cancellation?

General LEMNITZER. No, it is not. We are looking forward with a great deal of interest to getting LACROSSE into the hands of the troops. As a matter of fact, we have four battalions at Fort Sill right now being equipped and trained with LACROSSE. As soon as they are ready they are going to be deployed to Korea and to Europe.

Mr. MAHON. You have not let any contracts then for the improved LACROSSE?

General LEMNITZER. We have not.

Mr. MAHON. Why do you say that you have canceled it?

General LEMNITZER. Perhaps "canceled" is the wrong word. We just delayed or postponed any improvement program until such time as we have more resources available, and then I expect we will pick it up.

Mr. FORD. There are two things that surprise me, and in fact amaze me, in what has been admitted by the Marine Corps in reference to this. One, this kind of project, whether it was called LACROSSE or something else, was initiated in July of 1947. Apparently it got its name sometime in 1954, its present name.

General LEMNITZER. It was so named in 1952. They are in error on it. I had a hand in naming it myself when I returned from Korea in 1952 when I was Deputy Chief of Staff for Plans and Research.

Mr. FORD. Maybe I was wrong. It says in the fiscal year 1951 the Secretary of Defense approved the transfer of LACROSSE to the Army. Would that coincide more or less with what you have in mind?

General LEMNITZER. I would not quite agree with that. We had a concept similar to this. It was not a project; it was a study. It was a gleam in the eye—so to speak—of both the Army and the Marine Corps for this type of missile. We really got to work on it during the Korean war because it possessed the very characteristics we badly needed in Korea—that is, to hit a small target in the side of a mountain that would normally take a large quantity of artillery to knock out. That is the basic reason for the development of the LACROSSE.

Mr. FORD. The time of development from the inception of the idea to the present time, about 13 years, seems to be a very long time. Is that an unfair criticism?

General LEMNITZER. I would say this about that statement: we also had a requirement for this kind of missile, but in the late 1940's—1947, 1948 and 1949—we just did not have the missile capability that could meet these very strict military characteristics, which are very, very tough even for today's state of the art. It is tough to take a

missile, launch it, pick it up by radar, fly it over a front line, pick it up by a forward observer and then electronically steer it into an area no bigger than the side of the wall right there. That is what the LACROSSE missile can do. We would have liked to have it during World War II, but the state of the art did not make it possible to develop that kind of missile at that time.

Mr. FORD. The other thing which surprises me, and this is based on what the Marine Corps has said, is the fact, one, that LACROSSE will be procured—I gather with fiscal year 1961 funds.

General LEMNITZER. There is some being procured now with 1960 funds.

Mr. FORD. It will have ——— percent reliability.

General LEMNITZER. Missile-wise, I think that it is a pretty high reliability. It most certainly is for a first generation missile.

Mr. FORD. It is substantially higher?

General LEMNITZER. I do not admit that is something against the LACROSSE missile. I think that, for the type of missile it is, that is a rather high reliability. Everybody strives for 100 percent, but we do not always get it.

Mr. FORD. The second point they made is classified.

(Discussion off the record.)

General LEMNITZER. There has been a problem in that respect. We have it solved to our satisfaction. Here there is a difference of opinion. The Marines would like less interference than we are willing to accept. It was their decision to make. I still think they would like to have the LACROSSE missile.

(Discussion off the record.)

Mr. FORD. Is it the view of the Army that regardless of these comments and criticisms it is a justifiable expenditure in the fiscal years 1960 and 1961 to proceed with the procurement of LACROSSE?

General LEMNITZER. Indeed it is; otherwise, we would never have gone ahead with it?

Mr. FORD. How much do you forecast it would cost to go to the second generation?

General LEMNITZER. The program was on the order of $200 million. This is very clear to me, because we had a terrible time on this decision. We also had to cut back our present program somewhat in order to bring it within our available fiscal resources. We have fewer battalions than we originally planned. We cut back from 12 battalions to 8 battalions to bring it within our means. LACROSSE is still an excellent missile and our people overseas are looking forward to the arrival of these battalions.

Mr. FORD. When will they be in operation?

General LEMNITZER. This summer.

Mr. FORD. The summer of 1960?

General LEMNITZER. This summer, 1960.

Mr. FORD. When will you conclude the procurement of the program of LACROSSE No. 1?

General LEMNITZER. It would be some time next year, fiscal year 1962.

ELECTRONIC PROBLEM IN BATTLEFIELD AREA

Mr. MAHON. I am afraid that we are going to have so many electrical impulses emanating from the battlefield areas that confusion will be rampart—the contest cannot go on?

General LEMNITZER. The war will go on, but it will not go on with as many electrical gadgets as a great many people think there will be. It is an electronics battle. This is one of the important uses that we are making of Fort Huachuca. That is our electronics proving ground, and we have set it up precisely for this purpose.

Mr. MAHON. Is this new contract you are about to enter into for this three-year study going to embrace a study of the LACROSSE?

General LEMNITZER. It is to deal with this type of problem—to have a layout there that is comparable to the layout of a division on the battlefield. The equipment will be subjected to electronic countermeasures with a view of further improving our invulnerability to jamming. I could not agree with you more, the electronics spectrum is really being filled up.

Mr. MAHON. It seems to me that we ought to do a lot toward being realistic in the determination of what the area of battle is going to be in the electronics field.

General LEMNITZER. A good many of our devices are almost invulnerable to electronic countermeasures.

Mr. THOMSON. I would like to congratulate you for approaching this thing in this way. I certainly hope that you are successful. It would be wonderful if the men in the line could have some other way of doing it rather than going in with a flame-thrower and so forth. I found that there was substantial enemy interference when you tried to do it the other way also. I do not know how many lives were lost by reason of that interference, but it would add up to millions.

MISSILE MASTER

Mr. FORD. Along with your NIKE-AJAX and NIKE-HERCULES system you have the Missile Master. I noticed the other day you were announcing in the newspapers the operation of one in the Detroit, Mich., area.

Secretary BRUCKER. That is right.

Mr. FORD. How much has been spent on the Missile Master? How are you on the schedule for operational units? When will you complete it? Let us have all the information that you have.

General LEMNITZER. The Missile Master operational date for the Baltimore-Washington area was December, 1958. Seattle in January of this year, 1960. It should be operational now.

Mr. FORD. Of what year?

General LEMNITZER. Off the record.

(Discussion off the record.)

Secretary BRUCKER. I want to thank you gentlemen very much in behalf of the Army for the care and the attention that you and all the members of the committee have put on this. If there is anything at all we can do to cooperate to fill these schedules, let us know.

Mr. MAHON. You are all very cooperative.

Mr. FORD. The last one becomes operational when?

General LEMNITZER. Off the record.

Mr. FORD. Is the whole program on schedule based on the original schedule?

General LEMNITZER. No. There were certain problems in relating it to the overall air defense command control, of fitting our Missile Master in with a comparable type of equipment for the control of the entire air defense region. The Missile Master really keeps an inventory of incoming aircraft and employs the missile batteries to the best possible advantage. Necessarily, it must be linked to a similar type of equipment which handles the interceptor problem in a larger area.

Mr. FORD. Are you referring to the SAGE system here?

General LEMNITZER. Yes. The compatability of these two systems presented a problem. Our Missile Masters were available, but the compatability had to be worked out. Now they are going in side by side.

Mr. FORD. Are any of the Missile Master facilities hardened?

General LEMNITZER. No, they are not hardened. I would not regard them as soft. They are in the normal type of concrete building, but not hardened in the sense that we normally use the term "hardened."

Mr. FORD. What has been the cost of the program, or what will be the cost on completion?

General LEMNITZER. $163.8 million is the total program for the PEMA appropriation.

Mr. FORD. Does that include military construction as well as procurement?

General LEMNITZER. That is for the equipment; it includes hardware and improvements. The military construction and research and development costs we do not have, but we can add it for the record.

Mr. FORD. Supply the total cost, including research and development, procurement of missiles and construction.

General LEMNITZER. Yes.

(The requested information follows:)

Missile Master (AN/FSG-1)—Total program cost (obligations)

	Millions
Procurement of equipment and missiles	$163.8
Research, development, test, and evaluation	15.6
Military construction, Army	31.8
Total	211.2

CLOSING OF INSTALLATIONS

Mr. FORD. I think that it would be helpful for the record to show what military installations you are planning to close down during the fiscal year 1961, if any.

General LEMNITZER. I do not think we have made any decisions on this yet, Mr. Ford. We have this constantly before us with a view of reducing our costs, our maintenance costs. We presently have a study, but nothing has been decided. I think there would be certain problems in this regard; putting out a tentative list of installations to be closed down would stir up a considerable amount of controversy. I

am not quite sure how you would want to handle this. I mention that as a problem area.

Mr. LAIRD. It is a problem area and the Air Force has been doing just the opposite.

General LEMNITZER. You see the difficulty that we are talking about here. No decision has yet been made, and to indicate that there are so-called vulnerable areas would just cause a terrific storm.

TRANSFER FROM ARMY STOCK FUND

Mr. FORD. I notice in the budget that there is a recommendation to transfer $260 million from the Army stock fund to the Army military pay account. This committee is always delighted to find such funds available. We have always been able to find a little more. We are always told this is the last time such funds will be available. It seems to be an inexhaustible supply.

General Traub, do you have any comment?

General LEMNITZER. Not inexhaustible, I would like to make that comment.

General TRAUB. For the sake of correcting the record, the figure for the transfer this year is $260 million. We want to take advantage of every dollar that is in fact the case.

To answer the question when is the money going to run out, it depends to a very large degree on what mobilization reserve program we would embark upon in connection with the cash surpluses that are generated.

With the program envisioned for this year, and next year running at $30 million for 1960 and $35 million for 1961, for the mobilization procurement program, the stock fund people estimate that there would be a stable situation reached in the fund perhaps in the fiscal year 1963.

If, on the other hand, we had gone through with our planned mobilization reserve program in fiscal year 1960, which was approved last year at the rate of $175 million and at a similar rate in 1961, we believe we might have reached the stable state in the fiscal year 1962 rather than 1963.

As further information on the subject, we are generating surpluses now in this year as the result of a percentage factor of 85 percent procurement of the total sales in the stock fund. Next year we think it will go up to 87.5 percent.

Mr. FORD. What do you mean by that factor?

General TRAUB. Off the record.

(Discussion off the record).

General TRAUB. We will always generate a surplus because under stock fund procedures there are sales returns for which no credit is given to the customer of the fund.

Mr. FORD. I believe that is all, Mr. Chairman.

Mr. MAHON. General Lemnitzer, I believe this has been your first appearance before us as Chief of Staff.

General LEMNITZER. Yes, sir.

Mr. MAHON. I think you have done an outstanding job of discussing the questions which have been presented to you. Of necessity, these discussions have to be somewhat hurried. Of course, all the questions and all the answers cannot be completely ample.

It has been very stimulating to hear your testimony. I think you are going to make an outstanding record as Chief of Staff of the Army. We will be pleased to work with you and with the members of your staff.

Mr. FORD. May I echo and reemphasize those comments.

General LEMNITZER. Thank you very much.

Mr. MAHON. We appreciate having you and Secretary Brucker before us as well as the other members of your staff. It has been very helpful. Mr. Secretary, you have turned in your usual good performance.

The committee will stand adjourned.

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